

**IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION**

Trading Technologies International, Inc.)	
	)	Civil Action No. 05-4811
Plaintiff,)	
	)	Judge Sharon Johnson Coleman
v.)	
	)	Magistrate Sidney I. Schenkier
CQG, Inc. and CQGT, LLC)	
)	
Defendants.)	

**TRADING TECHNOLOGIES' CROSS-MOTION FOR PARTIAL SUMMARY
JUDGMENT THAT THE THAT THE "STATIC" LIMITATIONS MEET THE
WRITTEN DESCRIPTION REQUIREMENT**

Pursuant to Rule 56 of the Federal Rules of Civil Procedure, Trading Technologies, International, Inc., hereby cross-moves for partial summary judgment that:

1. The term "static display of prices" as set forth in the claims of U.S. Patent Nos. 6,772,132 ("132") meets the written description requirement of 35 U.S.C. § 112; and
2. The term "common static price axis" as set forth in the claims of U.S. Patent No. 6,776,304 ("304") meets the written description requirement of 35 U.S.C. § 112.

In support of its motion, TT is submitting a memorandum, a statement of undisputed material facts under Local Rule 56.1, and exhibits. TT's undisputed facts, set forth in TT's Additional Statement of Undisputed Material Facts in support of its Cross Motion for Summary Judgment, establish that there is more than enough written description support for the "static display of prices" and "common static price axis" terms in the provisional application (which is mirrored by the specification of the patents-in-suit).

finding that the terms “common static price axis” and “static display of prices” as found in the claims of the patents-in-suit meet the written description requirement.

Respectfully submitted,

Date: May 16, 2014

By: s/ Jennifer M. Kurcz
Leif R. Sigmund, Jr. (ID No. 6204980)
(sigmond@mbhb.com)
Matthew J. Sampson (ID No. 6207606)
(sampson@mbhb.com)
Michael D. Gannon (ID No. 6206940)
(gannon@mbhb.com)
S. Richard Carden (ID No. 6269504)
(carden@mbhb.com)
Jennifer M. Kurcz (ID No. 6279893)
(kurcz@mbhb.com)
Andrea K. Orth (ID No. 6301900)
(orth@mbhb.com)
McDonnell Boehnen Hulbert & Berghoff
300 South Wacker Drive
Chicago, Illinois 60606
Tel.: (312) 913-0001
Fax: (312) 913-0002

Steven F. Borsand (ID No. 6206597)
(Steve.Borsand@tradingtechnologies.com)
Trading Technologies International, Inc.
222 South Riverside
Suite 1100
Chicago, IL 60606
Tel: (312) 476-1000
Fax: (312) 476-1182
Attorneys for Plaintiff, TRADING
TECHNOLOGIES INTERNATIONAL, INC.

CERTIFICATE OF SERVICE

I certify that a copy of the foregoing **TRADING TECHNOLOGIES' CROSS-MOTION FOR PARTIAL SUMMARY JUDGMENT THAT THE "STATIC" LIMITATIONS MEET THE WRITTEN DESCRIPTION REQUIREMENT** was served on May 16, 2014 as follows:

Via Filing Via this Court's CM-ECF System, which caused a copy to be served on all registered users by E-mail:

Counsel for CQG, Inc., and CQGT, LLC:

Adam G. Kelly
Loeb & Loeb LLP
321 N. Clark Street,
Suite 2300
Chicago, IL 60654
akelly@loeb.com

Johnnet Simone Jones
Loeb & Loeb LLP
321 N. Clark Street,
Suite 2300
Chicago, IL 60654
sjones@loeb.com

William Joshua Voller
Loeb & Loeb LLP
321 N. Clark Street,
Suite 2300
Chicago, IL 60654
wvoller@loeb.com

s/ Jennifer M. Kurcz

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CQG, INC. AND CQGT, LLC.)	FILED UNDER SEAL
)	
Defendants.)	

TT'S COMBINED MEMORANDUM 1) IN OPPOSITION TO CQG'S MOTION FOR SUMMARY JUDGMENT THAT THE PATENTS-IN-SUIT ARE INVALID UNDER 35 U.S.C. §112 FOR LACK OF WRITTEN DESCRIPTION; AND 2) IN SUPPORT OF ITS CROSS-MOTION FOR PARTIAL SUMMARY JUDGMENT THAT THE "STATIC" LIMITATIONS MEET THE WRITTEN DESCRIPTION REQUIREMENT

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I. INTRODUCTION

Summary judgment for TT is appropriate because all of the recited claim elements of the patents-in-suit are explicitly disclosed in the specification. With respect to the “static” limitations, which have been construed as “a display of prices [a line] comprising price levels that do not change positions unless a manual re-centering [or re-positioning] command is received,” the specification, by way of both text and drawings, provides extensive support for this recited claim element. Indeed, Judge Moran and the parties expressly referenced the support in the specification during the Court's construction of the “static” terms. Therefore, the disclosure fully complies with the written description standard, i.e., whether persons of ordinary skill in the art recognize that the inventors possessed what is *claimed*, and TT is entitled to summary judgment in this regard.

On the other hand, CQG's motion must be denied. CQG ignores the proper legal standard for written description support, instead premising its summary judgment motion entirely on an incorrect standard, i.e. whether there is written description support for unclaimed, additional features found in the accused products. CQG's motion hinges upon the declaration of its expert, Dr. Mellor, who was led astray by the same legal error.¹ Specifically, CQG and Dr. Mellor insist that there is no support in the specification for a display having non-static zones. Dr. Mellor is focused on non-static zones not because they are required by the claims, but rather because such zones exist in the accused products. This misses the point because the claims as construed *do not require* non-static zones. Nor is TT asserting literal infringement based on the presence of non-static zones in CQG's product—TT is asserting literal infringement based on the fact that

¹ TT filed a motion to strike CQG's expert's report because the report misapplies this law, i.e., argues that written description support is lacking for failure to support what the claims *cover* instead of—what the claims *require*. Dkt. 591. Dr. Mellor's declaration in support of this motion suffers from the same legal error. If this Court grants TT's motion to strike, CQG's motion would be mooted by such a ruling.

CQG's accused products have a static display of prices, which meets the court's construction. The presence or absence of a non-static zone, which is the focus of CQG's motion, is completely irrelevant to the sufficiency of the written description because unclaimed, additional features need not be supported by the written description. Instead, the focus of the written description inquiry is whether the *recited claim elements* find support in the patent specification. Thus, the fact that CQG DOMTrader includes non-static zones on the top or bottom of a static display of prices is just as irrelevant as the color of the static display of prices in its product. Finally, CQG's motion relies on the same opinions from Dr. Mellor as were previously set forth in his expert report. This Court recently granted TT's motion to strike that expert report. Accordingly, CQG's motion must be denied.

II. ARGUMENT

A. Legal Standards

Summary judgment is appropriate when no genuine issue of material fact exists such that the moving party is clearly entitled to a judgment as a matter of law. FED. R. CIV. P. 56; *Celotex Corp. v. Catrett*, 477 U.S. 317, 322–23 (1986). In determining whether there is a genuine issue of material fact, the court must draw all inferences and view all evidence in the light most favorable to the non-moving party. *Celotex*, 477 U.S. at 324. The determination of whether a disclosure meets the written description requirement is a question of fact. *Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc). Summary judgment that a patent satisfies the written description requirement is appropriate when the court determines that no reasonable jury could find invalidity, taking into account that defendants face the burden of clear and convincing evidence to prove invalidity based on lack of written description. *Crown Packaging Tech. v. Ball Metal Bev. Container Corp.*, 635 F.3d 1373, 1380 (Fed. Cir. 2011).

A patent's specification meets the written description requirement of 35 U.S.C. § 112 so long as it "reasonably conveys to those skilled in the art that the inventor had possession of the *claimed* subject matter as of the filing date." *Ariad*, 598 F.3d at 1351 (emphasis added). In other words, "the patentee need only describe the invention *as claimed*, and need not describe an unclaimed method of making the claimed product." *Amgen Inc. v. Hoechst Marion Roussel, Inc.*, 314 F.3d 1313, 1333 (Fed. Cir. 2003) (emphasis added). While the *recited* features set forth in the claims must have adequate written description support, there is no need to provide support for *unrecited* features. *Ethicon Endo-Surgery, Inc. v. U.S. Surgical Corp.*, 93 F.3d 1572, 1582 (Fed. Cir. 1996) (explaining that a specification supports a claim that does not recite a feature yet reads on a product that contains the feature); *see also Spine Solutions, Inc. v. Medtronic Sofamor Danek USA, Inc.*, 620 F.3d 1305, 1313 (Fed. Cir. 2010) (affirming lower court's ruling denying written description motion for summary judgment where claim recited "adapted to enter a groove" but did "not cover the groove itself, applicants were not required to disclose grooves or how grooves should be formed or cut.").

To determine whether a disclosure meets the written description requirement, a court must undertake "an objective inquiry into the four corners of the specification from the perspective of a person of ordinary skill in the art." *Ariad*, 598 F.3d at 1351. Courts often consider expert testimony about how one skilled in the art would understand the specification to assist with this inquiry. *Trading Techs. Int'l, v. eSpeed, Inc.*, 595 F.3d 1340, 1360-61 (Fed. Cir. 2010). There is no requirement for an *in haec verba* disclosure and the written description requirement is satisfied so long as a claim term is expressly, implicitly, or inherently disclosed in the specification. *Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1563 (Fed. Cir. 1991); *Reiffin v. Microsoft Corp.*, 214 F.3d 1342, 1346 (Fed. Cir. 2000).

An issued patent is statutorily presumed to be valid. *See* 35 U.S.C. § 282. This presumption is based on “the expertise of patent examiners presumed to have done their job.” *Brooktree Corp. v. Advanced Micro Devices, Inc.*, 977 F.2d 1555, 1574 (Fed. Cir. 1992). It is the job of the Patent Office to make sure that applicants have complied with the written description requirement. M.P.E.P § 2106; *In re Bilski*, 545 F.3d 943, 996-97 (Fed. Cir. 2008), *aff’d but criticized sub nom. Bilski v. Kappos*, 130 S. Ct. 3218 (2010) (stating that “[t]he MPEP also requires examiners to identify all grounds of rejection in the first official PTO action to avoid unnecessary delays in examination”). To overcome the presumption of validity of patents, the challenger must prove invalidity by clear and convincing evidence and this burden never shifts. *Hynix Semiconductor Inc. v. Rambus Inc.*, 645 F.3d 1336, 1351 (Fed. Cir. 2011); *Tech. Licensing Corp. v. Videotek, Inc.*, 545 F.3d 1316, 1329 (Fed. Cir. 2008).

B. The “Static” Terms As Construed

In the coordinated *Markman* proceedings in *eSpeed*,² the key terms at issue were the “static” limitations, which occur in the independent claims of both of the patents-in-suit. For example, Claim 1 of the ‘132 patent recites in part:

displaying market depth of the commodity, through a dynamic display of a plurality of bids and a plurality of asks in the market for the commodity, including at least a portion of the bid and ask quantities of the commodity, the dynamic display being aligned with a static display of prices corresponding thereto, wherein the static display of prices does not move in response to a change in the inside market;

displaying an order entry region aligned with the static display prices comprising a plurality of areas for receiving commands from the user input devices to send trade orders, each area corresponding to a price of the static display of prices; and

² The CQG Defendants here participated in those coordinated *Markman* proceedings.

TT SOF ¶ 14. Judge Moran construed “static display of prices” from the independent claims of the ‘132 patent as “a display of prices comprising price levels that do not change positions unless a manual re-centering command is received. Dkt. 105, at 6. Likewise, Judge Moran construed “common static price axis” from the independent claims of the ‘304 patent as “a line comprising price levels that do not change positions unless a manual re-centering command is received and where the line of prices corresponds to at least one bid value and one ask value.” *Id.* Judge Moran clarified that a “static display of prices”/“common static price axis” could move in response to any type of manual movement or repositioning. In particular, he stated that “[o]ur earlier constructions remain, and we clarify that the price axis never changes positions unless by manual re-centering or re-positioning.” Dkt. 120, at 8; *accord TT v. eSpeed, Inc.*, 595 F.3d 1340, 1353 (Fed. Cir. 2010). The Federal Circuit affirmed these constructions on appeal, which govern the present written description analysis.

Although this Court recently rejected CQG’s attempt to modify the construction of “static” to require all prices (Dkt. 757, at 7), CQG’s present motion seeks to make the same flawed argument in another way – contending that any claim that covers products with a static price axis and also non-static zones/price levels is not supported.

C. TT’s Motion Should Be Granted Because The Static Terms Are Fully Supported By The Written Description Of The Patents-In-Suit

As the claims have already been construed, the Court must use this construction (and not the accused products) to then determine whether the “static” limitations are supported by the specification. *C.R. Bard, Inc. v. M3 Systems, Inc.*, 157 F.3d 1340, 1360 (Fed. Cir. 1998) (reversing jury verdict of invalidity based on written description where analysis was based on an erroneous claim construction). The claim construction of the “static” terms from the *eSpeed* case controls here. Dkt. 735, at 7.

The specification is examined from the perspective of a person of ordinary skill in the art. *Ariad*, 598 F.3d at 1351. Although TT and CQG dispute the level of skill attributable to such a person of ordinary skill in the art (“POSITA”), the level of skill is not at issue here because it has no impact on the outcome and TT prevails under either standard.³ As set forth below, the inquiry is straightforward because the claimed “static” element is explicitly disclosed in the written description. Indeed, CQG’s own expert admits that “static” is disclosed by the specification – an admission that by itself supports granting TT’s motion. TT SOF ¶ 43.

Both the provisional application and the specifications of the patents-in-suit are rife with written description support for the “static” limitations, i.e., “a display of prices [line] comprising price levels that do not change positions unless a manual re-centering [or re-positioning] command is received.”

The provisional provides both text and drawing to support the “static” limitation. For starters, the provisional states that the invention, known as Mercury, “displays a static vertical column of prices... .” TT SOF ¶ 27. Multiple figures of the invention within the provisional disclose “static”, and the provisional explains that “[t]he price column remained static, but the corresponding bids and asks rose up the price column.” TT SOF ¶¶ 28-29.

³ CQG’s argument that the invention need not be interpreted from the perspective of the user is contrary to controlling law. *See TT v. eSpeed*, 04-cv-5312, Dkt. No. 963, at 2 (“As we have continually noted, however, plaintiff’s patents generally were written from the perspective of the user.”). In any event, TT’s POSITA is capable of both making and using the invention because TT’s definition requires that such person have two years designing and/or programming graphical user interfaces, including experience based on input from a person with knowledge of needs of an electronic trader. TT SOF ¶ 26.

of prices with the bids and asks displayed in vertical columns to the side of the price column. An example of this display follows:

EW	10:48:44	BidQ	AskQ	Prc	LTO
	L 3			104	99
	R 5			24	98
	720			33	97
	X 10			115	96
	0			33	95
	10 1H			27	94
	60 3H			63	93
S 0	1K 6H			46	92
W 24	CLR			20	91
S 0	X 10			20	90
W 7	17				90
	CXL	18			89
H 0					89
W 15					88
H 0					88
W 13	NET 0	30			87
					86
H 0					86
W 17	NET REAL	43			86
					85
					84
					84
					83
					83
					82
					82
					81
					81

Bid quantities are in the blue column and ask quantities are in the red column. In this example, the inside market is 18 (best bid quantity) at 89 (best bid price) and 20 (best ask quantity) at 90 (best ask price).

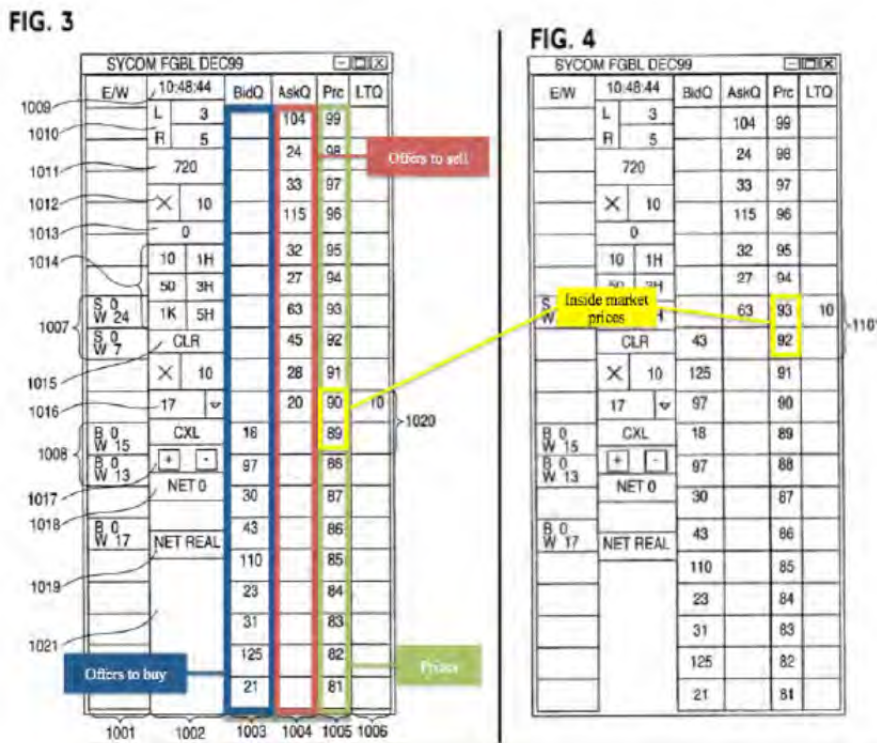
The inside market and market depth ascend and descend as prices in the market increase and decrease. For example, the following screen depicts the same market at a later interval where the inside market has risen three ticks.

EW	10:49:44	BidQ	AskQ	Prc	LTO
	L 3			104	99
	R 5			30	98
	720			33	97
	X 10			115	96
	0			32	96
	10 1H			27	94
	60 3H			63	93
S 10	1K 6H			63	93
W 14	CLR			43	92
	X 10	125			91
	12				90
	CXL	18			89
H 0					89
W 15					88
H 0					88
W 13	NET 0	30			87
					86
H 0					86
W 17	NET REAL	43			86
					85
					84
					84
					83
					83
					82
					82
					81
					81

Again, the provisional discusses that “the market ascends or descends the price column....” TT SOF ¶ 30. Further, the provisional discloses manual recentering. *Id.* Thus, the provisional alone fully supports that the inventor possessed the “static” terms as construed at the time of the filing of the provisional application. TT SOF ¶¶ 31-32.

Both the text and drawings from the specification of the patents-in-suit make the same disclosure as the provisional application and show that the inventors had invented “a display [line] of prices comprising price levels that do not change positions unless a manual re-centering command is received [and where the line of prices corresponding to at least one bid value and one ask value].” See TT SOF ¶ 36 ('132 patent at 7:29-31; '304 patent at 7:48-50 (“In the preferred embodiment of the invention, the Mercury display is a static vertical column of prices . . .”); '132 patent at 7:46; '304 patent at 7:65 (“The values in the price column are static . . .”)).

Further, Figures 3 and 4 of the patents-in-suit are similar to the figures from the provisional referenced above. Figures 3 and 4 of the patents-in-suit have been reproduced below:



TT SOF ¶ 34. The patents-in-suit similarly explain that “in comparing FIGS. 3 and 4, it can be seen that the price column remained static, but the corresponding bids and asks rose up the price column.” TT SOF ¶ 35. Accordingly, the specification fully supports the “static” limitations as construed, as Dr. Pirrong confirms in his declaration. TT SOF ¶ 32.

As the claimed elements of a “static display of prices”/“common static price axis” are expressly disclosed by the provisional, with the same disclosure repeated in the specification of the patents-in-suit, no genuine issue of material fact exists and no reasonable jury could find that the claims are invalid for lack of written description support. Although most written description challenges involve a claim term that is not expressly disclosed in the specification (which may still ultimately be found to be supported, as there is no *in haec verba* requirement for such support), the present case is even easier to address because the claim term is explicitly in the

specification. Further, as described below in response to CQG's summary judgment motion, there are no unusual circumstances that would justify departing from the general rule that disclosure of a claim element in the written description satisfies the written description requirement. Accordingly, this Court should grant TT's motion for partial summary judgment that the "static" terms are supported by the written description.

D. CQG'S Motion That There Is No Written Description Support for "Static" Is Based On A Legally Flawed Argument and Must Be Denied

Earlier today, this Court granted TT's motion to strike the expert report of CQG's expert, Dr. Mellor. Dkt. 748. Although this motion for summary judgment relies almost exclusively on a Declaration from Dr. Mellor rather than his expert report, the Order striking Dr. Mellor's expert report should result in the denial of the present motion. In particular, Dr. Mellor testified at his deposition that his opinions in the Declaration "are the same opinions that are included in my expert report." TT SOF ¶ 51. As the underlying report has been stricken, so too should the same opinions as reflected in the Declaration be stricken. And, given that this Court must, in resolving CQG's motion, draw all inferences and view all evidence in the light most favorable to TT as non-moving party, there is simply no reasonable possibility that CQG can prove that the written description is deficient by clear and convincing evidence, especially where CQG's motion relies almost exclusively on Dr. Mellor's opinions. Although this alone provides an independent basis to deny CQG's motion, TT addresses the substance of CQG's motion, as follows.

CQG and its expert ignore the relevant inquiry of whether there is written description support for the invention *as claimed* and incorrectly pose the irrelevant question of whether the written description supports *unclaimed*, additional features in the accused products. TT SOF ¶ 45-46; Dkt. 712, at 15. Indeed, CQG's expert acknowledged this fatal error at his recent

deposition, where he admitted that he never analyzed whether there is written description support for what is recited or required by the claims. TT SOF ¶ 46. Instead, he was asked to analyze, and CQG's motion is based on, whether there is written description support for a price column where "some but not all" of the price levels are static.⁴ TT SOF ¶ 48. Put another way, CQG's argument is based on the opinion that there is no support for a price column that includes a zone with a range of static price levels and other non-static zones. CQG's expert further acknowledged that his analysis was based on what the claims might "cover" in the infringement context. TT SOF ¶ 50. Because of these errors alone, CQG's motion should be denied.

As demonstrated in Section C above, under the proper analysis, there plainly is written description support for the "static" terms as construed in this case. Moreover, CQG's own expert *agrees* that the written description shows static price levels, and the specification does not require that all displayed price levels be static or disclaim the use of the disclosed static price levels with additional non-static price levels. TT SOF ¶¶ 43-44. Therefore, under the proper written description analysis, there is actually no dispute and TT is entitled to partial summary judgment.

Instead of focusing on the proper analysis, CQG focuses on a price column where "some but not all" of the price levels are static, because TT has accused CQG's DOMTrader product of infringement. CQG's expert characterized CQG's DOMTrader as having a price column where some but not all price levels are static. In particular, as described by CQG's expert, CQG's

⁴ CQG's expert, Dr. Mellor, as one might expect, is not familiar with the proper legal definition of the written description requirement. Instead, his analysis went astray because CQG's counsel defined his task improperly, i.e., he was asked to opine as to whether there is written description support for a price column where "some but not all" of the price levels are static. TT SOF ¶ 48.

DOMTrader is “Trifurcated”⁵ in its default setting, having three parts: 1) a middle zone with a static display of prices or a static price axis⁶; 2) a top, non-static zone; and 3) a bottom, non-static zone. TT SOF ¶ 57. The non-static zones are areas in which a “Market Window” may appear, either on the top or bottom of the static display of prices. However, the addition of the top and bottom non-static zones does not affect the functionality of the static display of prices/static price axis in the middle zone of the screen.

The Market Window, as CQG refers to this feature in its manuals, is merely an additional window that may appear in the non-static zones of the DOMTrader whenever the best bid or best ask in the market would otherwise go off of the screen. TT SOF ¶ 59. For many years, a trader could not even place an order in the Market Window, which simply serves as a viewer window for the user to track the inside market. TT SOF ¶ 60. Like the presence of the non-static zones themselves, the appearance of a Market Window in the DOMTrader has no effect on the functionality of the price axis in the middle zone, which is “static.” TT SOF ¶ 61. TT’s infringement contentions have repeatedly identified the static display of prices in the middle zone as forming the basis for infringement. *Cf.* CQG Br. at 6; TT SOF ¶ 62. In internal emails, CQG’s former patent trial counsel even acknowledged that TT’s infringement contention on the DOMTrader is “fairly persuasive.”⁷ TT SOF ¶ 63.

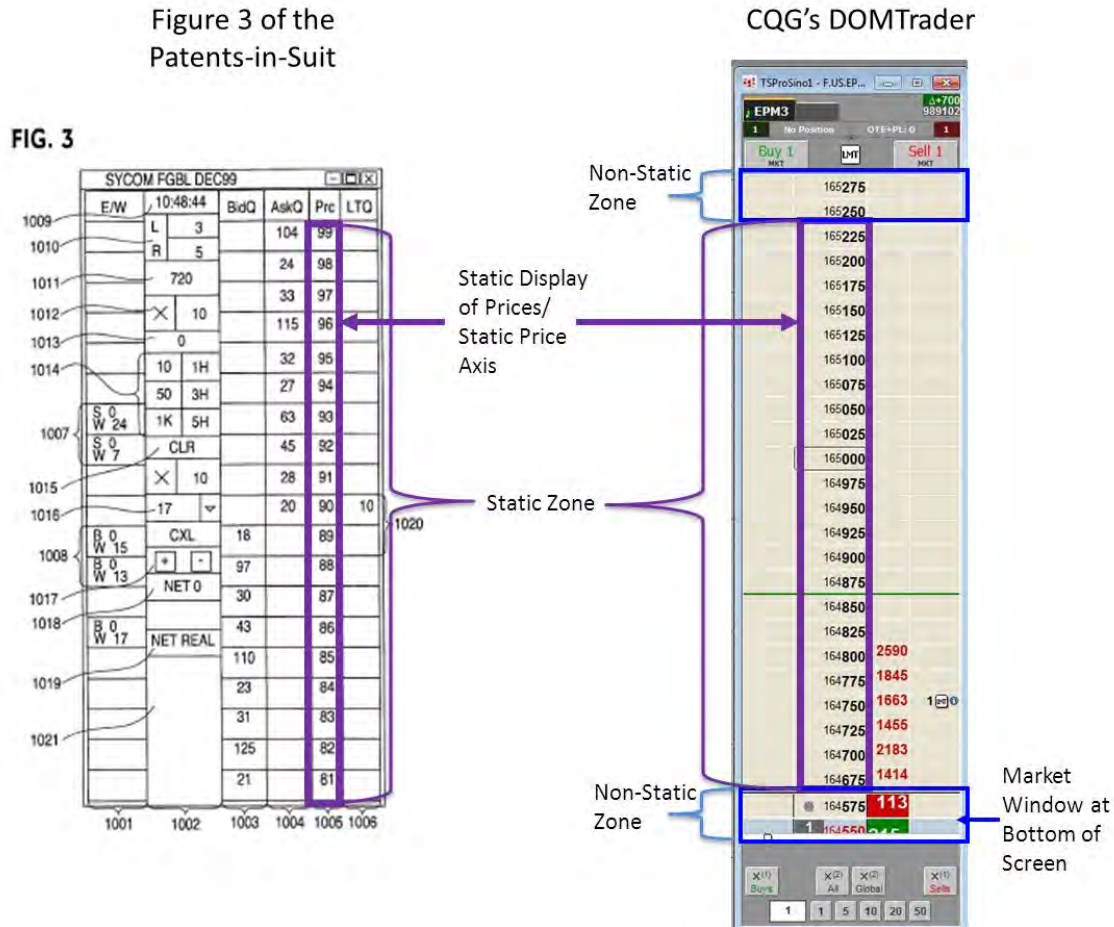
The “Trifurcated” DOMTrader is no different from TT’s patented invention except that it

⁵ CQG’s expert, Dr. Mellor, initially coined the term, “Trifurcated” to describe TT’s argument with respect to the three distinct parts of the DOMTrader in his first expert report regarding the written description issue.

⁶ The middle zone is in a “static” mode when a price is selected by a user. In most versions, a user may also configure the Market Window to be larger than the DOMTrader, and thus disable any Market Windows from appearing. Under this setting, the entire price scale is a static price axis.

⁷ Mr. Fischer later became head of marketing at CQG. When he served as trial counsel he was unaware that the product worked such that it included the middle zone of static price levels. TT SOF ¶ 65. He thought all of the price levels were not static. *Id.*

includes additional, unclaimed features. For example, the picture below compares Figure 3 of TT's patented invention against CQG's DOMTrader and shows that DOMTrader has a static display of prices identical to that of Figure 3. The only difference is that the DOMTrader has extra features on the top and bottom that are not static, i.e., where a Market Window may appear to display the inside market.



1. The Written Description Requirement Mandates Support For What Is Claimed, Not Support For All Features In The Accused Products

CQG's motion incorrectly focuses on the functionality of the accused product and not on the only relevant inquiry – whether there is written description support for what is *claimed*. It is indisputable that the claims do not recite non-static zones and do not recite a price column that

includes a range of static price levels and additional ranges of non-static price levels. TT SOF ¶ 38-41, 43-44. As shown above, the non-static zones in the DOMTrader are merely features within the accused product additional to the “static” price axis/price display. Contrary to CQG’s allegations in its summary judgment motion, TT does *not* contend that the non-static zones where Market Windows may appear comprise part of the “static display of prices.” *Cf.* CQG Br. at 6. Because non-static zones are not limitations of the claims, it simply makes no difference whether the written description discusses non-static zones.

The caselaw is clear that there is no requirement to provide written description support for unclaimed features present in an accused product. *Amgen*, 314 F.3d at 1333 (“the patentee need only describe the invention *as claimed*, and need not describe an unclaimed method of making the claimed product.”); *see also Cornell University v. Hewlett-Packard Co.*, 654 F. Supp. 2d 119, 126 (N.D. N.Y. 2009) (“A patent need not, however, disclose unclaimed subject matter.”) (citing *Amgen*) (Rader, J, sitting by designation). The written description analysis focuses on identifying support for what is *claimed*, not the products that the claims are *asserted* against. *See Iridex Corp. v. Synergetics, Inc.*, 478 F. Supp. 2d 1146, 1148 (E.D. Mo. 2007) (rejecting argument that specification did not support the claims covering accused products); *Inline Connection Corp. v. AOL Time Warner, Inc.*, No. 02-272-MPT, 2007 WL 275928 (D. Del. Jan. 29, 2007) (excluding expert testimony for improperly offering an opinion that the specification did not enable the accused products under § 112).

Importantly, CQG’s expert admitted that CQG’s counsel instructed him to examine only whether there was written description support for a price column where some but not all prices are static—not to evaluate whether there was support for what the claims as construed recite. TT SOF ¶ 48. Accordingly, CQG’s motion is based on a legally irrelevant analysis.

Throughout its motion, CQG creates confusion by conflating the issue of what a claim actually *recites* versus the scope of what a claim "*covers*", in an infringement context. *See, e.g.,* CQG Br. at 15 (claiming that TT is asserting that the claims "*cover* subject matter that is not described in the specification..."). However, this distinction is critical. If a feature is recited in a claim (e.g., a "static" price axis), its presence in an accused product is required for infringement and there needs to be written description support for such claimed elements. *Amgen*, 314 F.3d at 1333. On the other hand, the presence of an additional unclaimed feature (e.g., a non-static zone) in an accused product is irrelevant. *See, e.g., Crystal Semiconductor Corp. v. TriTech Microelectronics Int'l, Inc.*, 246 F.3d 1336, 1348 (Fed. Cir. 2001) (setting forth a presumption that patent claims do not exclude additional, unrecited elements); *Smith & Nephew, Inc. v. Ethicon, Inc.*, 276 F.3d 1304, 1311 (Fed. Cir. 2001) (vacating summary judgment of noninfringement because district court erred in construing limitation of a claimed method as excluding any device that performed an additional step where claim used transitional phrase "comprising", stating that "A claim is not defective when it states fewer than all of the steps that may be performed in practice of an invention). Indeed, in *Ethicon Endo-Surgery, Inc. v. U.S. Surgical Corp.*, 93 F.3d 1572, 1582 fn.7 (Fed. Cir. 1996), the Federal Circuit explained that a specification that would not support a claim that recited a given feature could nonetheless support a claim that did *not recite* the feature but did *cover* a product that contained the feature.

Other courts have rejected similar arguments as CQG makes here. In *Iridex*, the Court noted that Defendant Synergetics's written description challenge was doomed, like CQG's argument here, as Synergetics's "argues with the court's claim construction and argues that if the claims are broad enough to cover the Synergetics products, they must be invalid." 478 F. Supp. 2d at 1148. The court rejected Synergetics's argument, which was focused on the accused

products instead of identifying “any claim that is broader than the specification.” *Id.* Similarly, in *Cornell University v. Hewlett-Packard Co.*, 654 F. Supp. 2d at 131, Federal Circuit Judge Rader, sitting by designation, echoed this holding. In *Cornell*, the Court rejected the argument that the term “register renaming” lacked written description support because register renaming “is not part of the claimed invention.” *Id.* In short, the focus of the written description analysis must be on what the claims recite, not additional, unclaimed features.

This makes sense—otherwise, no claim would be valid because there are always an infinite number of unclaimed features that could be a part of an accused product. For example, certain of the accused CQG products include a “tan” price axis. Even though the patents-in-suit do not disclose an example of a “tan” price axis, CQG is not arguing that the claims are invalid because the accused products have this “tan” colored price axis. The claims do not recite or require a “tan” price axis, and yet the scope of the claims “cover” a product in which the price axis happens to be “tan” (or any other color for that matter). In other words, the claims “cover” the accused products because they have a static price axis, regardless of the color of the price axis. Because the claims merely recite a price axis and do not recite that the price axis is “tan,” there is no need to provide written description support for “tan.” CQG’s failure to provide any analysis based on the language *of the claims* is alone fatal to its motion.

2. Nothing in The Written Description or File History Requires “Static” To Include Non-Static Zones/All Price Levels Displayed

In general, where, as here, a claim term has explicit written description support, that ends the inquiry and the written description requirement is satisfied. *Reiffin v. Microsoft Corp.*, 214 F.3d 1342, 1346 (Fed. Cir. 2000). A few cases have identified a narrow exception to this general rule; specifically, if the written description unambiguously identifies an essential or required feature pertaining to the invention that is missing from the claims (i.e., the patent is “claiming

less than all” of the features of invention), then there may be a written description issue. *See Crown*, 635 F.3d at 1381. Although CQG’s motion does not articulate the “claiming less than all” argument, CQG cites a number of written description cases in that vein. CQG Br. at pp. 14-15. Under this line of cases, the only grounds for CQG to argue that TT’s claims do not have written description support would be if the written description had unambiguously identified an essential or required feature pertaining to “static” that was missing from the claims. *See Crown*, 635 F.3d at 1381. The cases cited by CQG are inapposite.

In particular, the Federal Circuit has distinguished *Lizardtech*, *Tronzo*, and *ICU Medical* cases as occurring where “the specification *unambiguously* limited the scope of the invention.” *Crown*, 635 F.3d at 1382 (emphasis added). *Cf. ICU Medical, Inc. v. Alaris Medical Systems, Inc.*, 558 F.3d 1368 (Fed. Cir. 2009), *Tronzo v. Biomet, Inc.*, 156 F.3d 1154 (Fed. Cir. 1998), and *LizardTech, Inc. v. Earth Resources Mapping, Inc.*, 424 F.3d 1336 (Fed. Cir. 2005). In each of those cases, the claims failed to recite a feature that was unambiguously stated to be essential and required. *ICU Medical*, 558 F.3d at 1373-78 (applicant tried to broaden claims beyond disclosed invention by removing a limitation directed to a spike that was required by the specification); *LizardTech, Inc.*, 424 F.3d at 1347 (specification disclosed only one specific method for solving one particular problem—creating “seamless” discrete wavelet transforms for use in electronic image data compression); *Tronzo*, 156 F.3d at 1159 (finding that written description did not support broad claims to generic-shaped artificial joint cup implant where specification distinguished prior art shapes as inferior and touted advantages of the conical shape). CQG has identified no such “unambiguous” limitation of claim scope in the patents-in-suit or file history because none exists. TT SOF ¶ 44. As there is no essential or required feature pertaining to

“static” that is missing from the claims, TT’s disclosure of the “static” terms in the written description fully supports the claims and satisfies the written description requirement.

For starters, CQG’s own expert admitted that “static” is disclosed by the written description. TT SOF ¶ 43. In his analysis, Dr. Mellor did not examine what the claims required on his own, but simply adopted his counsel’s request that he determine if there was support for non-static zones, i.e., what the claims cover versus what they recite. TT SOF ¶¶ 46, 48. More importantly, as Dr. Pirrong details in his declaration, neither the provisional, specifications, nor file histories identify any essential or required features pertaining to “static” that are missing from the claims. TT SOF ¶ 38. Thus, it is clear that the “claiming less than all” argument would be unavailing to CQG, even if CQG were to pursue it. There is simply nothing in the specification that identifies any essential or required feature pertaining to “static” that is missing from the claims.

In addition, CQG does not allege any clear and unmistakable disclaimer in the provisional, specification or file history that would require that “all “ price levels must be static or that would preclude the use of non-static zones in addition to the claimed “common static price axis”/”static display of prices.” In claim construction, claims are only limited if there had been a clear and unmistakable disavowal of claim scope. *Thorner v. Sony Computer Entm’t Am. LLC*, 669 F.3d 1362, 1366 (Fed. Cir. 2012) (disavowal must evidence a clear “intent to deviate from the ordinary and accustomed meaning of a claim term by including in the specification expressions of manifest exclusion or restriction.”); *Revolution Eyewear, Inc. v. Aspex Eyewear, Inc.*, 563 F.3d 1358, 1368 (Fed. Cir. 2009) (disclaimer must be shown with “reasonable clarity and deliberateness.”). Dr. Mellor acknowledges that there is no statement in the specification that “all” price levels must be static or that the invention cannot be used with “non-static” zones.

TT SOF ¶¶ 44-45. Therefore, CQG cannot manufacture any argument that there is a written description issue based on the claims being broader than a disavowal.⁸

CQG's expert's arguments that there are suggestions that the disclosed static price levels cannot be used with non-static price levels lack merit. First, as explained above, a mere suggestion is not enough – there needs to be an unambiguous and clear statement. In any event, the written description here does not even remotely hint at such a restriction. TT SOF ¶ 40. For instance, CQG argues that TT's "static" price display may not be used with any other non-static zones because one of the downsides to TT's screen being "static" is that the inside market could go off the top or bottom of the screen. CQG Br. at 10. CQG contends that "static" cannot exist absent this downside, and ergo, that TT does not have possession of the "static" limitation at all. Of course, CQG's argument fails because there is nothing in patent law that prohibits parties from solving problems with patented inventions. To the contrary, legions of improvement patents are based on this very notion. However, devising an improvement to a drawback of a patented invention does not absolve a party from infringing the patent upon which the improvement is based, just as CQG's addition of non-static zones to a "static display of prices" does not take it outside the scope of infringing TT's patents. *Siemens Med. Solutions USA, Inc. v. Saint-Gobain Ceramics & Plastics, Inc.*, 647 F.3d 1373, 1375 (Fed. Cir. 2011).

CQG's remaining arguments improperly rest on redefining portions of the claims, which is a non-starter, as this Court recently rejected CQG's attempts to further construe terms or the constructions already provided by Judge Moran. Thus CQG's attempt to 1) reconstrue "static price axis or display of prices" as a price "column"; 2) construe "axis" as a "line"; 3) change the

⁸ Indeed, if there was any such clear and unmistakable disclaimer, Judge Moran would have issued a narrower claim construction.

construction of “common” from “in relationship with” to “universal”; and 4) treat the term “display” as requiring “all such displayed prices [to be] static” must be denied.

As an initial matter, CQG cites nothing in the specification that commands that TT’s “static display of prices”/“common static price axis” be treated as a “static” price “column” that cannot be used with non-static price levels. To the contrary, CQG’s own cited dictionary definition (relied on by Dr. Mellor) shows an example of a column that is comprised of multiple different parts. TT SOF ¶ 52

With respect to “common”, Judge Moran previously construed “common” as “in relationship with.” Markman Order at 9. In reaching that construction, Judge Moran explained “[t]hat market depth, which includes the best bid and the best ask, can be displayed on an angle gives further support to plaintiff’s contention that ‘common’ connotes no more than a relationship between the price axis and the bid and ask display regions.” *Id.* Accordingly, there is no basis to reinterpret that term (as this Court has already ruled).

Further, CQG’s argument that “axis” in the claim supports in any way that the disclosed range of static price levels cannot be used with other ranges of non-static price levels is baseless. Indeed, there is nothing in the provisional, specification, or file wrappers that states that the use of the term “axis” in the claims of the ‘304 patent prohibits the use of other ranges of non-static price levels with a range of static price levels. TT SOF ¶ 55. And CQG’s half-hearted argument that the term “display” means that the screen “displays prices and that all such displayed prices are static” lacks support—CQG’s cite does not even include the term “display” in it. *Cf.* CQG SMF at ¶ 36. In any event, there is nothing in the term “display” that prohibits the use of the “static display of prices” with other features, such as non-static price levels. TT SOF ¶ 56.

CQG's arguments that horizontal and vertical brackets in the figures of the patents-in-suit similarly fail. No reasonable person would interpret such brackets as limiting the scope of the invention and precluding its use with additional features. TT SOF ¶ 40. CQG cites no cases or other statements in the file wrapper that would give such identification brackets such limited meaning. Rather, the brackets merely identify features in the figures.

Finally, even though CQG does not go so far as to argue there has been a disavowal of claim scope and its expert has admitted that no such disavowal exists (TT SOF ¶¶ 43-44), neither the specification nor the file history include any clear and unambiguous statement that would preclude "static" from being used with additional features or otherwise require that all prices displayed on a screen must be "static." TT SOF ¶ 40; *Revolution Eyewear*, 563 F.3d at 1368 (disclaimer must be shown with "reasonable clarity and deliberateness."). Accordingly, there is no basis to argue that the expressly disclosed "static" terms lack written description support and this Court should deny CQG's motion.

III. CONCLUSION

Because there is more than enough written description support for the "static display of prices" and "common static price axis" terms in the provisional application (which is mirrored by the specification of the patents-in-suit), the Court should grant TT's motion for partial summary judgment that "static" satisfies the written description requirement. CQG's motion must be denied because it does not look for support for the claims as construed, but is incorrectly premised on the assumption that the specification must support additional, unclaimed features, such as non-static zones. This is not the law, and there is nothing in the provisional, specification or file wrapper that precludes "static" price levels from being used with non-static price levels.

Respectfully submitted,

Date: May 16, 2014

s/ Jennifer M. Kurcz

Leif R. Sigmond, Jr. (ID No. 6204980)
(sigmond@mbhb.com)

Matthew J. Sampson (ID No. 6207606)
(sampson@mbhb.com)

Michael D. Gannon (ID No. 6206940)
(gannon@mbhb.com)

S. Richard Carden (ID No. 6269504)
(carden@mbhb.com)

Jennifer M. Kurcz (ID No. 6279893)
(kurcz@mbhb.com)

Andrea K. Orth (ID No. 6301900)
(orth@mbhb.com)

**McDonnell Boehnen Hulbert
& Berghoff LLP**

300 South Wacker Drive
Chicago, Illinois 60606

Tel.: (312) 913-0001

Fax: (312) 913-0002

Steven F. Borsand (ID No. 6206597)
(Steve.Borsand@tradingtechnologies.com)

**Trading Technologies
International, Inc.**

222 South Riverside
Suite 1100

Chicago, IL 60606

Tel: (312) 476-1000

Fax: (312) 476-1182

**Attorneys for Plaintiff,
TRADING TECHNOLOGIES
INTERNATIONAL, INC.**

CERTIFICATE OF SERVICE

I certify that a copy of the foregoing TT'S COMBINED MEMORANDUM 1) IN OPPOSITION TO CQG'S MOTION FOR SUMMARY JUDGMENT THAT THE PATENTS-IN-SUIT ARE INVALID UNDER 35 U.S.C. §112 FOR LACK OF WRITTEN DESCRIPTION; AND 2) IN SUPPORT OF ITS CROSS-MOTION FOR PARTIAL SUMMARY JUDGMENT THAT THE "STATIC" LIMITATIONS MEET THE WRITTEN DESCRIPTION REQUIREMENT was served on May 16, 2014 as follows:

Via Filing Via this Court's CM-ECF System, which caused a copy to be served on all registered users and Via E-mail:

Counsel for CQG, Inc., and CQGT, LLC:

Adam G. Kelly
Loeb & Loeb LLP
321 N. Clark Street, Suite 2300
Chicago, IL 60654
akelly@loeb.com

Johnnet Simone Jones
Loeb & Loeb LLP
321 N. Clark Street, Suite 2300
Chicago, IL 60654
sjones@loeb.com

William Joshua Voller
Loeb & Loeb LLP
321 N. Clark Street, Suite 2300
Chicago, IL 60654
wvoller@loeb.com

s/ Jennifer M. Kurcz

Xu, Ling

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To: ecfmail_ilnd@ilnd.uscourts.gov
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Docket Text:

SEALED RESPONSE by Trading Technologies International, Inc. to MOTION by Counter Claimants CQG, Inc., CQG, Inc., CQG, Inc., CQGT, LLC, CQGT, LLC, CQGT, LLC, Defendants CQG, Inc., CQGT, LLC for summary judgment <i>CQGS MOTION FOR SUMMARY JUDGMENT THAT THE 304 AND 132 PATENTS ARE INVALID UNDER 35 U.S.C. SECTION 112[709], MOTION by Counter Defendant Trading Technologies International, Inc., Plaintiff Trading Technologies International, Inc. for partial summary judgment <i>THAT THE STATIC LIMITATIONS MEET THE WRITTEN DESCRIPTION REQUIREMENT</i>[749] <i></i> (Orth, Andrea)

1:05-cv-04811 Notice has been electronically mailed to:

Adam Glenn Kelly
akelly@loeb.com, chdocket@loeb.com, mmarshall@loeb.com, skunzendorf@loeb.com

Alan Wayne Krantz
krantz@mbhb.com

Andrea Kay Orth
orth@mbhb.com, poulakos@mbhb.com

Brandon J Kennedy
kennedy@mbhb.com

Christopher D Butts
butts@mbhb.com

George I. Lee
lee@mbhb.com

Jennifer M Kurcz
kurcz@mbhb.com

Jeremy E. Noe
noe@mbhb.com

Johnnet Simone Jones
sjones@loeb.com, chdocket@loeb.com, poliosi@loeb.com

Kara Eve Foster Cenar
kara.cenar@bryancave.com, carol.duracka@bryancave.com, chdocketing@bryancave.com

Kirsten L. Thomson
thomson@mbhb.com, cross-jones@mbhb.com, dineen@mbhb.com, poulakos@mbhb.com,
xu@mbhb.com

Leif R. Sigmond
, Jr sigmond@mbhb.com

Mariangela M. Seale
merili.seale@bryancave.com, CHDocketing@bryancave.com, lisa.held@bryancave.com

Matthew J. Sampson
sampson@mbhb.com

Michael David Gannon
gannon@mbhb.com, becker@mbhb.com

Michelle Lynn McMullen-Tack
mcmullen-tack@mbhb.com

Paul H. Berghoff
berghoff@mbhb.com

Paul S. Tully
tully@mbhb.com

S. Richard Carden
carden@mbhb.com, santoyo@mbhb.com

Steven F. Borsand
steve.borsand@tradingtechnologies.com

William Joshua Voller
wvoller@loeb.com, akorolyova@loeb.com, chdoeket@loeb.com, poliosi@loeb.com

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**IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION**

Trading Technologies International, Inc.	)	Civil Action No. 05-4811
)	
Plaintiff,	)	Judge Sharon Johnson Coleman
)	
v.	)	Magistrate Sidney I. Schenkier
)	
CQG, Inc. and CQGT, LLC)	
	)	FILED UNDER SEAL
Defendants.)	
)	

TRADING TECHNOLOGIES INTERNATIONAL, INC.S'

**(1) RESPONSES AND OBJECTIONS TO CQG'S STATEMENT OF
UNDISPUTED MATERIAL FACTS IN SUPPORT OF ITS MOTION FOR
SUMMARY JUDGMENT**

AND

**(2) STATEMENT OF UNDISPUTED MATERIAL FACTS IN SUPPORT OF ITS
CROSS-MOTION FOR PARTIAL SUMMARY JUDGMENT THAT THE
"STATIC" LIMITATIONS MEET THE WRITTEN DESCRIPTION
REQUIREMENT**

In accordance with Federal Rule of Civil Procedure 56 and Local Rule 56.1(a) and (b), Trading Technologies International, Inc. (“TT”) hereby sets forth its disagreement, if any, with the “Statement of Undisputed Material Facts” submitted by Defendants in support of its motion for summary judgment that the ‘304 and ‘132 patents are invalid under 35 U.S.C. 112, paragraph 1 for lack of written description, and sets forth additional undisputed material facts in cross-support motion for summary judgment that the patents-in-suit are not invalid under 35 U.S.C. 112, paragraph 1 for lack of written description support.

**Responses and Objections to Defendants’ Statement of
Undisputed Material Facts**

1. This action arises under the Patent Laws of the United States, 35 U.S.C. §§ 1, *et. seq.*
(Answer To First Amended Complaint, Dkt. #332 ¶ 5.)

RESPONSE: TT admits the allegations in Paragraph 1.

2. Plaintiff Trading Technologies International, Inc. (“TT”) is a Delaware Corporation with its principal place of business at 222 South Riverside Plaza, Suite 1100, Chicago, Illinois 60606.
(Answer to First Amended Complaint, Dkt. #332 ¶ 1.)

RESPONSE: TT admits the allegations in Paragraph 2.

3. Defendant CQG, Inc. is a Colorado Corporation with its principal place of business at 1050 17th Street, Suite 2000, Denver, CO 80265. (Answer to First Amended Complaint, Dkt. #332 ¶ 2.)

RESPONSE: TT admits the allegations in Paragraph 3.

4. Defendant CQGT, LLC (“CQGT”) is a Colorado Limited Liability Company with its principal place of business at 1050 17th Street, Suite 2000, Denver, CO 80265. (Answer to First Amended Complaint, Dkt. #332 ¶ 3.) CQGT was formed by CQG on August 15, 2005 and is a wholly-owned subsidiary of CQG, Inc. (Answer to First Amended Complaint, Dkt. #332 ¶ 4.)

RESPONSE: TT admits the allegations in Paragraph 4.

5. This Court has jurisdiction and venue is proper pursuant to 28 U.S.C. §§ 1331, 1338, 1391(c), and 1400(b). (Answer to First Amended Complaint, Dkt. #332 ¶¶ 5, 9.)

RESPONSE: TT admits the allegations in Paragraph 5.

6. U.S. Patent No. 6,766,304 (“the ’304 patent”) and U.S. Patent No. 6,772,132 (“the ’132 patent”) share an identical written description. (*Compare* Voller Decl.¹, Ex. A *with id.*, Ex. B; *id.*, Ex. D at ¶ 13.)

RESPONSE: TT admits that the ’304 patent and the ’132 patent share a common written description with the exception of a statement in the ’304 patent that indicates that it is a divisional application of Ser. No. 09/590,962. ’304 patent, col. 1: ll 4-6. TT further notes that the patents-in-suit have different claims. TT denies the remaining allegations in Paragraph 6.

7. The ’304 patent includes 2 independent claims: claims 1, and 27. (Voller Decl., Ex. A at cols. 12-16; Voller Decl., Ex. D at ¶ 17.)

RESPONSE: TT admits the allegations in Paragraph 7.

8. Claim 1 of the ’304 patent states:

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

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

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

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

displaying an order entry region comprising a plurality of locations for receiving commands to send trade orders, each location corresponding to a price level along *the common static price axis*; and in response to a selection of a particular location of the order entry region by a single action of a user input device, setting a plurality of parameters for a trade order relating to the commodity and sending the trade order to the electronic exchange.

(Voller Decl., Ex. A at col. 12 l.35-col. 13 l.3 (emphasis added); see Voller Decl., Ex. D at ¶ 17.)

RESPONSE: TT admits that Paragraph 8 accurately quotes claim 1 of the '304 patent, although altering the claim language to include italics for emphasis.

9. Claim 27 of the '304 patent states:

27. A computer readable medium having program code recorded thereon for execution on a computer *for displaying market information relating to and facilitating trading of a commodity being traded in an electronic exchange having an inside market with a highest bid price and a lowest ask price on a graphical user interface*, the program code causing a machine to perform the following method steps:

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

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

displaying the bid and ask display regions in relation to fixed price levels positioned along the *common static price axis* such that when the inside market changes, the price levels along the *common static price axis* do not move and at least one of the first and second indicators moves in the bid or ask display regions relative to the *common static price axis*;
displaying an order entry region comprising a plurality of locations for receiving commands to send trade orders, each location corresponding to a price level along the *common static price axis*; and

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

(Voller Decl., Ex. A at col. 14 l.47-col. 15 l.17 (emphasis added); *see* Voller Decl., Ex. D at ¶ 18.)

RESPONSE: TT admits that Paragraph 9 accurately quotes claim 27 of the '304 patent although altering the claim language to include italics for emphasis.

10. The '132 patent includes 3 independent claims: claims 1, 8, and 14. (Voller Decl., Ex. B at col. 12-16; Voller Decl., Ex. D at ¶ 19.)

RESPONSE: TT admits the allegations in Paragraph 10.

11. Claim 1 of the '132 patent states:

1. A method of *placing a trade order for a commodity on an electronic exchange having an inside market with a highest bid price and a lowest ask price, using a graphical user interface and a user input device*, said method comprising:

setting a preset parameter for the trade order[;]

displaying market depth of the commodity, through a dynamic display of a plurality of bids and a plurality of asks in the market for the commodity, including at least a portion of the bid and ask quantities of the commodity, the dynamic display being aligned with a *static display of prices* corresponding thereto, wherein the *static display of prices* does not move in response to a change in the inside market;

displaying an order entry region aligned with the *static display prices* comprising a plurality of areas for receiving commands from the user input devices to send trade orders, each area corresponding to a price of the *static display of prices*; and

selecting a particular area in the order entry region through single action of the user input device with a pointer of the user input device positioned over the particular area to set a plurality of additional parameters for the trade order and send the trade order to the electronic exchange.

(Voller Decl., Ex. B at col. 12 ll.2-27 (emphasis added); see Voller Decl., Ex. D at ¶ 19.)

RESPONSE: TT admits that Paragraph 11 accurately quotes claim 1 of the '132 patent although altering the claim language to include italics for emphasis.

12. Claim 8 of the '132 patent states:

8. A computer readable medium having program code recorded thereon, for execution on a computer having a *graphical user interface* and a user input device, *to place a trade order for a commodity on an electronic exchange having an inside market with a highest bid price and a lowest ask price*, comprising:

a first program code for setting a preset parameter for the trade order;

a second program code displaying market depth of a commodity, through a dynamic display of a plurality of bids and a plurality of asks in the market for the commodity, including the bid and ask quantities of the commodity, aligned with a *static display of prices* corresponding thereto, wherein the *static display of prices* does not move in response to a change in the inside market;

a third program code for displaying an order entry region comprising a plurality of areas for receiving commands from the user input device to send trade orders, aligned with the *static display of prices*, each area corresponding to a price of the *static display of prices*; and

a fourth program code for receiving a command as a result of a selection of a particular area in the order entry region by a single action of the user input device with a pointer of the user input device positioned over the particular area, to set a plurality of additional parameters for the trade order and send the trade order to the electronic exchange.

(Voller Decl., Ex. B at col. 12 l.57-col. 13 l.17 (emphasis added); *see* Ex. D at NN 19-20.)

RESPONSE: TT admits that Paragraph 12 accurately quotes claim 8 of the '132 patent although altering the claim language to include italics for emphasis.

13. Claim 14 of the '132 patent states:

14. A client system *for placing a trade order for a commodity on an electronic exchange having an inside market with a highest bid price and a lowest ask price*, the system comprising:

a parameter setting component for setting a preset parameter for the trade order;

a display device for displaying market depth of a commodity, through a dynamic display of a plurality of bids and a plurality of asks in the market for the commodity, including the bid and ask quantities of the commodity, aligned with a *static display of prices* corresponding thereto, wherein the *static display of prices* does not move when the inside market changes, and for displaying an order entry region aligned with the *static display of prices*, comprising a plurality of areas for receiving commands to send trade orders, each area corresponding to a price of *the static display of prices*;

a user input device for positioning a pointer thereof over an area in the order entry region; and

a trade order sending component for receiving a command as a result of a selection of the area in the order entry region by a single action of the user input device with a pointer of the user input device positioned over the area, to set a plurality of additional parameters for the trade order and send the trade order to the electronic exchange.

(Voller Decl., Ex. B at col. 13 l.55-col. 14 l.14 (emphasis added); *see* Ex. D at NN 19-20.)

RESPONSE: TT admits that Paragraph 13 accurately quotes claim 14 of the '132 patent although altering the claim language to include italics for emphasis.

14. The '304 and '132 patents (“patents-in-suit”) do not use the term “common static price axis” other than in the claims. (Voller Decl., Exs. A, B.)

RESPONSE: TT admits that the exact words “common static price axis” appear in the claims of the ‘304 patent but not in the specification. To the extent that Paragraph 14 implies anything more, then TT denies such implication. The term is taught by the provisional and specification of the ‘132 and ‘304 patents. Kurcz Decl., Ex. I at ¶¶ 36-44. TT also notes that the term “common static price axis” does not appear in the claims of the ‘132 patent.

15. The patents-in-suit do not use the term “static display of prices” other than in the claims and in the Summary of the Invention section of the written description. (Voller Decl, Exs. A, B.)

RESPONSE: TT admits that the term “static display of prices” appears in the claims of the ‘132 patent, and in the Summary of the Invention section of the patents-in-suit. TT denies the remaining allegations in Paragraph 15.

16. The Summary of the Invention Section of the patents-in-suit state:

Specifically, the present invention is directed to a graphical user interface for displaying the market depth of a commodity traded in a market, including a dynamic display for a plurality of bids and for a plurality of asks in the market for the commodity and a static display of prices corresponding to the plurality of bids and asks. In this embodiment the pluralities of bids and asks are dynamically displayed in alignment with the prices corresponding thereto. Also described herein is a method and system for placing trade orders using such displays.

(Voller Decl., Ex. A at col.3 ll.15-24; Voller Decl., Ex. B at col.3 ll.11-21.)

RESPONSE: TT admits that Paragraph 16 quotes a portion of the Summary of the Invention Section of the patents-in-suit. TT denies that Paragraph 16 is a complete recitation of the Summary of the Invention section of the patents-in-suit.

17. The patents-in-suit state:

As described herein, the display and trading method of *the present invention* provide the user with certain advantages over systems in which a display of market depth, as shown in FIG. 2, is used. The *Mercury display* and trading method of *the present invention* ensure fast and accurate execution of trades by displaying market depth on a vertical or horizontal plane, which fluctuates logically up or down, left or right across the plane as the market prices fluctuates. This allows the trader to trade quickly and efficiently. *An example of such a Mercury display is illustrated in the screen display of FIG. 3.*

* * *

The *Mercury display* overcomes . . . problem[s associated with the prior art] in an innovative and logical manner. *Mercury* also provides an order entry system, market grid, fill window and summary of market orders in one simple window. Such a condensed display materially simplifies the trading system by entering and tracking trades in an extremely efficient manner. *Mercury displays market depth in a logical, vertical fashion or horizontally or at some other convenient angle or configuration.* A vertical field is shown in the figures and described for convenience, but the field could be horizontal or at an angle. In turn, *Mercury* further increases the speed of trading and the likelihood of entering orders at desired prices with desired quantities. *In the preferred embodiment of the invention, the Mercury display is a static vertical column of prices with the bid and ask quantities displayed in vertical columns to the side of the price column and aligned with the corresponding bid and ask prices. An example of this display is shown in FIG. 3.*

Bid quantities are in the column 1003 labeled BidQ and ask quantities are in column 1004 labeled AskQ. The representative ticks from prices for the given commodity are shown in column 1005. The column, does not list the whole prices (e.g. 95.89), but rather, just the last two digits (e.g. 89). In the example shown, the inside market, cells 1020, is 18 (best bid quantity) at 89 (best bid price) and 20 (best ask quantity) at 90 (best ask price). In the preferred embodiment of the invention, these three columns are shown in different colors so that the trader can quickly distinguish between them.

The values in the price column are static; that is, they do not normally change positions unless a re-centering command is received (discussed in detail later). The values in the Bid and Ask columns however, are dynamic; that is, they move up and down (in

the vertical example) to reflect the market depth for the given commodity. The LTQ column 1006 shows the last traded quantity of the commodity.

(Voller Decl., Ex. A at col.7 l.16-col.8 l.20; Voller Decl., Ex. B at col.6 l.62-col.7 l.52 (emphasis added.)

RESPONSE: TT objects to Paragraph 17 because it incompletely quotes from the patents-in-suit, as shown by the ellipsis and stars. TT admits that the first, third and fourth paragraphs set forth in Paragraph 17 quote portions of the patents-in-suit although altering the language from the patents to include italics for emphasis. TT objects to the second paragraph of Paragraph 17 because it includes text not in the patents-in-suit and deletes text in the patents-in-suit, and thus denies the remaining allegations in Paragraph 17.

18. Figure 3 of the patents-in-suit is depicted below.

FIG. 3

SYCOM FGBL DEC99						
E/W	10:48:44	BidQ	AskQ	Prc	LTQ	
1009	L 3		104	99		
1010	R 5		24	98		
1011	720		33	97		
1012	X 10		115	96		
1013	0					
1014	10 1H		32	95		
	50 3H		27	94		
1007	S O W 24 1K 5H		63	93		
	S O W 7 CLR		45	92		
1015	X 10		28	91		
1016	17		20	90	10	1020
1008	B O W 15 CXL	18		89		
	B O W 13 + -	97		88		
1017	NET 0	30		87		
1018	B O W 17 NET REAL	43		86		
1019		110		85		
		23		84		
1021		31		83		
		125		82		
		21		81		

(Voller Decl., Ex. A at FIG. 3; Voller Decl., Ex. B at FIG. 3.)

RESPONSE: TT admits that Paragraph 18 accurately reproduces Figure 3 of the patents-in-suit.

19. The patents-in-suit state:

The inside market and market depth ascend and descend as prices in the market increase and decrease. For example, FIG. 4 shows a screen displaying the same market as that of FIG. 3 but at a later interval where the inside market, cells 1101, has risen three ticks. Here, the inside market for the commodity is 43 (best bid quantity) at 92 (best bid price) and 63 (best ask quantity) at 93 (best ask price). In comparing FIGS. 3 and 4, it can be seen that the price column remained static, but the corresponding bids and asks rose up the price column. Market Depth similarly ascends, and descends

the price column, leaving a vertical history of the market.

As the market ascends or descends the price column, the inside market, might go above or below the price column displayed on a trader's screen. Usually a trader will want to be able to see the inside market to assess future trades. The system of the present invention addresses this problem with a one click centering feature. With a single click at any point within the gray area, 1021, below the "Net Real" button, the system will re-center the inside market on the trader's screen. Also, when using a three-button mouse, a click of the middle mouse button, irrespective of the location of the mouse pointer, will re-center the inside market on the trader's screen.

The same information and features can be displayed and enabled in a horizontal fashion. Just as -the market ascends and descends the vertical Mercury display shown in FIGS. 3 and 4, the market will move left and right in the horizontal Mercury display. The same data and the same information gleaned from the dynamical display of the data is provided. It is envisioned that other orientations can be used to dynamically display the data and such orientations are intended to come within the scope of the present invention.

(Voller Decl., Ex. A at col.9 ll.4-34; Voller Decl., Ex. B at col.8 l.38-col.9 l.2 (emphasis added).)

RESPONSE: TT admits that Paragraph 19 quotes a portion of the patents-in-suit although altering the language from the patents to include italics for emphasis.

20. Figure 4 of the patents-in-suite is depicted below.

FIG. 4

SYCOM FGBL DEC99					
E/W	10:48:44	BidQ	AskQ	Prc	LTQ
	L 3		104	99	
	R 5		24	98	
	720		33	97	
	X 10		115	96	
	0		32	95	
	10 1H		27	94	
	50 3H		63	93	10
S 10 W 14	1K 5H		43	92	
	CLR		125	91	
	X 10		97	90	
	17		18	89	
B 0 W 15	CXL		97	88	
B 0 W 13	+ -		30	87	
	NET 0		43	86	
B 0 W 17	NET REAL		110	85	
			23	84	
			31	83	
			125	82	
			21	81	

(Voller Decl., Ex. A at FIG. 4; Voller Decl., Ex. B at FIG. 4.)

RESPONSE: TT admits that Paragraph 20 accurately reproduces Figure 4 of the patents-in-suit.

21. TT's Amended Final Infringement Contentions state:

TT contends that three of CQG's electronic trading products include a component, the *DOMTrader window*, that is covered by certain claims of . . . the '304 patent . . . and . . . the '132 patent . . . The *DOMTrader* is present in CQG's trading products known as CQG Integrated Client (CQG IC), CQG Trader (CQGT), CQG WebTrader (WT).

* * *

TT further contends that certain versions of the CQG IC product include an additional component, the *ChartTrader window*, which is also covered by certain claims of the patents-in-suit.

(Voller Decl., Ex. C at 1-2 (emphasis added.))

RESPONSE: TT objects to Paragraph 21 as misleading because it incompletely quotes from TT's Amended Final Infringement Contentions, as shown by the ellipsis and stars. TT admits that Paragraph 21 quotes a portion of TT's Amended Final Infringement Contentions (with emphasis added and portions excerpted).

22. CQG's Twenty-Seventh Amended Objections and Responses to TT's Amended Interrogatory Nos. 17-21 state:

Generally, . . . the DOM Grid associated with the [DOMTrader] . . . Windows for CQG IC and CQGT comprises at least three columns: (1) a buy column; (2) *a price column*; and (3) a sell column.

* * *

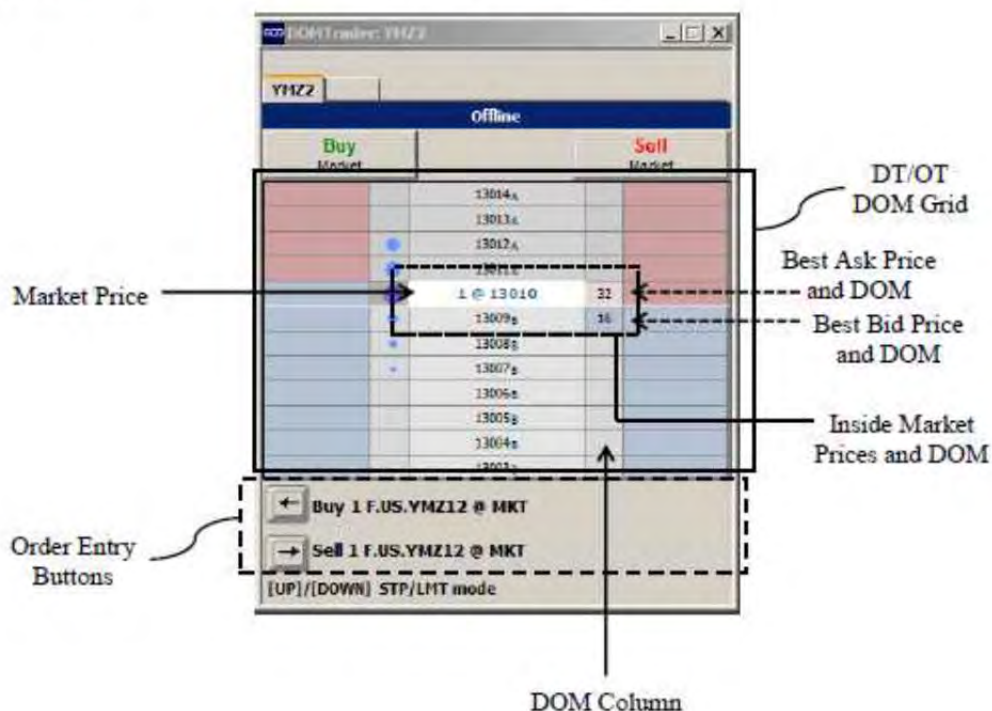
The ChartTrader Window includes a 'Chart' and a '[ChartTrader] DOM Grid.' . . . The [ChartTrader] DOMGrid is appended to the right side of the [chart] and includes four columns: (1) *a price column*, (2) a depth of market or DOM column, (3) a buy column, and (4) a sell column.

(Voller Decl, Ex. H at 31, 122) (emphasis added).

RESPONSE: TT objects to Paragraph 22 because it incompletely quotes from CQG's Twenty-Seventh Amended Objections and Responses to TT's Amended Interrogatory Nos. 17-21. TT admits that Paragraph 22 quotes a portion of CQG's Twenty-Seventh Amended Objections and Responses to TT's Amended Interrogatory Nos. 17-21 (with emphasis added and portions excerpted).

23. Figure 1A of CQG’s Twenty-Seventh Amended Objections and Responses to TT’s Amended Interrogatory Nos. 17-21 depicted below illustrates an exemplary DOMTrader Window in CQG IC Version No. 7.3801. The third column from the left is the vertical “price column.”

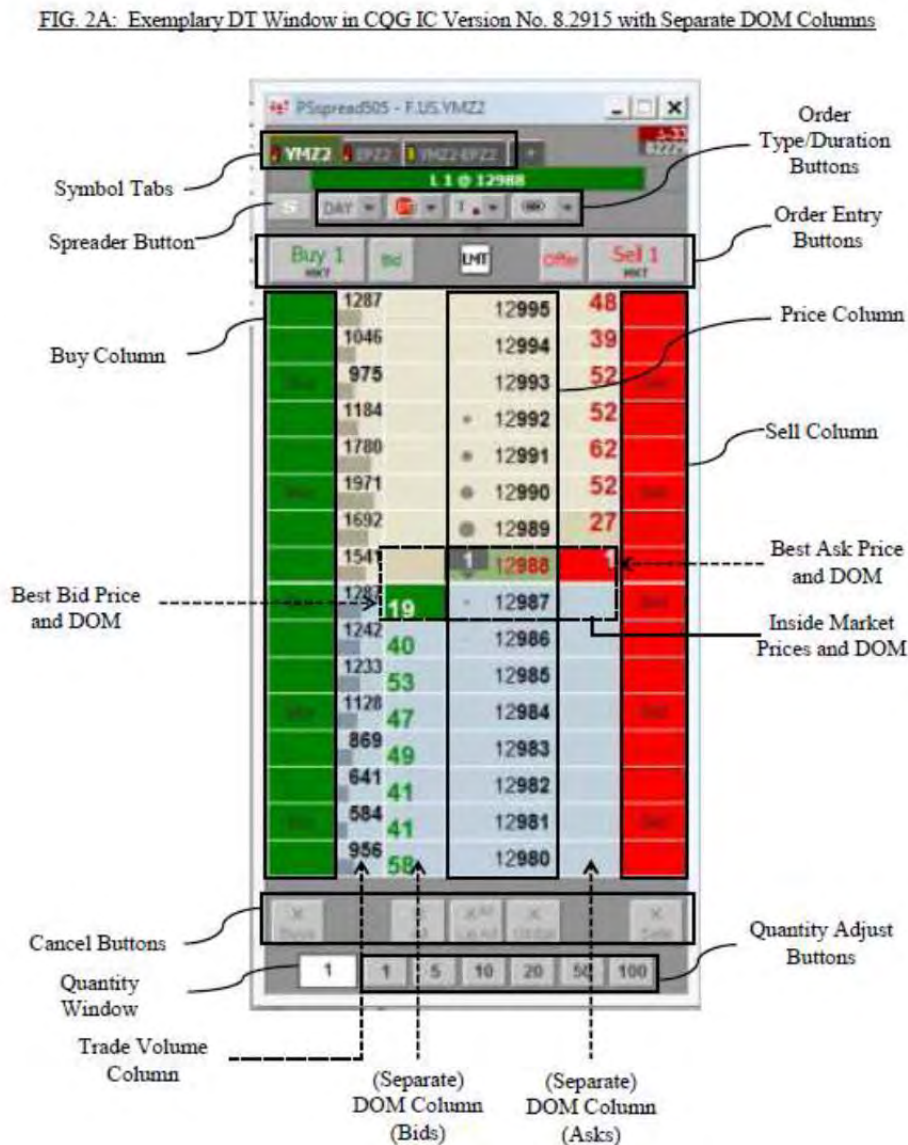
FIG. 1A: Exemplary DT Window in CQG IC Version No. 7.3801



(Voller Decl., Ex. H at 33.)

RESPONSE: TT admits that Paragraph 23 accurately reproduces Figure 1A of CQG’s Twenty-Seventh Amended Objections and Responses to TT’s Amended Interrogatory Nos. 17-21, characterized by CQG as an "exemplary" DOMTrader Window in CQG IC Version No. 7.3801. TT admits that price levels are displayed in the middle column displayed above, but denies the remaining allegations in Paragraph 23.

24. Figure 2A of CQG's Twenty-Seventh Amended Objections and Responses to TT's Amended Interrogatory Nos. 17-21 depicted below illustrates an exemplary DOMTrader Window in CQG IC Version No. 8.2915. The fourth column from the left is the vertical "price column."

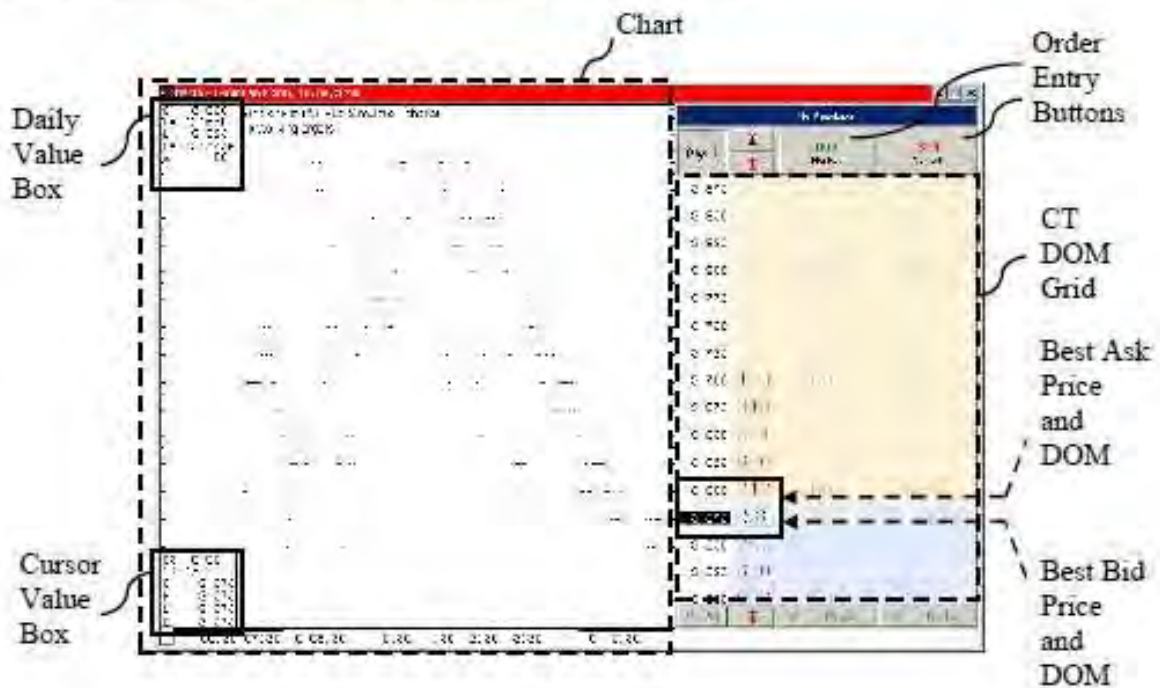


(Voller Decl., Ex. H at 36.)

RESPONSE: TT admits that Paragraph 24 accurately reproduces Figure 2A of CQG’s Twenty-Seventh Amended Objections and Responses to TT’s Amended Interrogatory Nos. 17-21, characterized by CQG as an "exemplary" DOMTrader Window in CQG IC Version No. 8.2915. TT admits that price levels are displayed in the column labeled “Price Column,” but denies the remaining allegations in Paragraph 24.

25. Figure 6A of CQG’s Twenty-Seventh Amended Objections and Responses to TT’s Amended Interrogatory Nos. 17-21 depicted below illustrates an exemplary ChartTrader Window in CQG IC Version No. 7.2834. The second column from the left within the ChartTrader DOM Grid is the vertical “price column.”

FIG. 6A: Exemplary CT Window in CQG IC Version No. 7.2834



(Voller Decl., Ex. H at 33.)

RESPONSE: TT admits that Paragraph 25 accurately reproduces Figure 6A of CQG's Twenty-Seventh Amended Objections and Responses to TT's Amended Interrogatory Nos. 17-21, characterized by CQG as an "exemplary" ChartTrader Window in CQG IC Version No. 7.2834. TT is unable to admit or deny the remaining allegations in Paragraph 25 because the figure above is illegible and further because CQG has not produced an operable sample of the ChartTrader Window in CQG IC Version No. 7.2834.

26. TT's Amended Final Infringement Contentions state:

[T]he DOMTrader window in versions CQGIC from 7.1817- 7.3802 and Versions of CQGT/WT from 2.741-2.8137 has at least one mode of operation that *includes a common static price axis/static display of prices* in which there is no possibility of automatic movement. *The price axis in the Non-Market Window Zone of the DOMTrader Responsive Scale* is in a static mode when any of the following is true:

- 1) a price is selected anywhere in the DOMTrader, or
- 2) a working order is selected in the Non-Market Window Zone of the DOM Trader.

In addition, if the Market Window is resized to be larger/the same size as the DOMTrader, no Market Window may be displayed and *the entire price scale is a static price axis* if a price or order is selected anywhere. . . .

(Voller Decl., Ex. C at 10-11 (emphasis added.))

RESPONSE: TT admits that Paragraph 26 quotes portions of TT's Amended Final Infringement Contentions (although altering the language to include italics for emphasis) but objects to the quotation as incomplete and therefore denies that Paragraph 26 accurately reflects TT's contention.

27. TT's Amended Final Infringement Contentions state:

Therefore, the DOMTrader in [Versions of CQG IC from 8.1872-8.2848] has at least one mode of operation that *includes a common static price axis/static display of prices* in which there is no possibility of automatic movement. *The price axis in the Non-Market Window Zone of the DOMTrader* Responsive Scale is in a static mode when any of the following is true:

- 1) a price is selected anywhere in the DOMTrader, or
- 2) a working order is selected in the Non-Market Window Zone of the DOM Trader.

Also, in these versions, if the price or order is selected in one of the Market Window Zones, the common static price axis/static display of prices will extend through that portion of the price scale as well. In addition, if the Market Window is resized to be larger/the same size as the DOMTrader, no Market Window may be displayed and *the entire price scale is a static price axis* if a price or order is selected anywhere.

(Voller Decl., Ex. C at 15) (emphasis added).

RESPONSE: TT admits that Paragraph 27 quotes a portion of TT's Amended Final Infringement Contentions (although altering the language to include italics for emphasis) but objects to the quotation as incomplete and therefore denies that Paragraph 27 accurately reflects TT's contention.

28. TT's Amended Final Infringement Contentions state:

Therefore, the DOMTrader in [Versions of CQG IC from 8.2852-8.4810 excluding 8.3847-8.3850 and Versions of CQGT/WT from [4].01.107-4.01.112] has at least one mode of operation that *includes a common static price axis/static display of prices* in which there is no possibility of automatic movement. *The price axis in the Non-Market Window Zone of the DOMTrader* Responsive Scale is in a static mode when any of the following is true:

- 1) a price is selected anywhere in the Non-Market Pane Zone, or
- 2) a working order is selected in the Non-Market Window

Zone of the DOM Trader.

In addition, if the Market Window is resized to be larger/the same size as the DOMTrader, no Market Window may be displayed and *the entire price scale is a static price axis* if a price or order is selected anywhere.

(Voller Decl., Ex. C at 16 (emphasis added.))

RESPONSE: TT admits that Paragraph 28 accurately quotes a portion of TT's Amended Final Infringement Contentions (although altering the language to include italics for emphasis) but objects to the quotation as incomplete and therefore denies that Paragraph 28 accurately reflects TT's contention.

29. TT's Amended Final Infringement Contentions state:

Therefore, the DOMTrader in [Versions of CQG IC from 7.3803-8.1865 and Versions of CQGT/WT from 2.931-4.00.696] has at least one mode of operation that *includes a common static price axis/static display of prices. The common static price axis/static display of prices comprises the entire DOMTrader Responsive Scale, and the static mode operates when the following are true:*

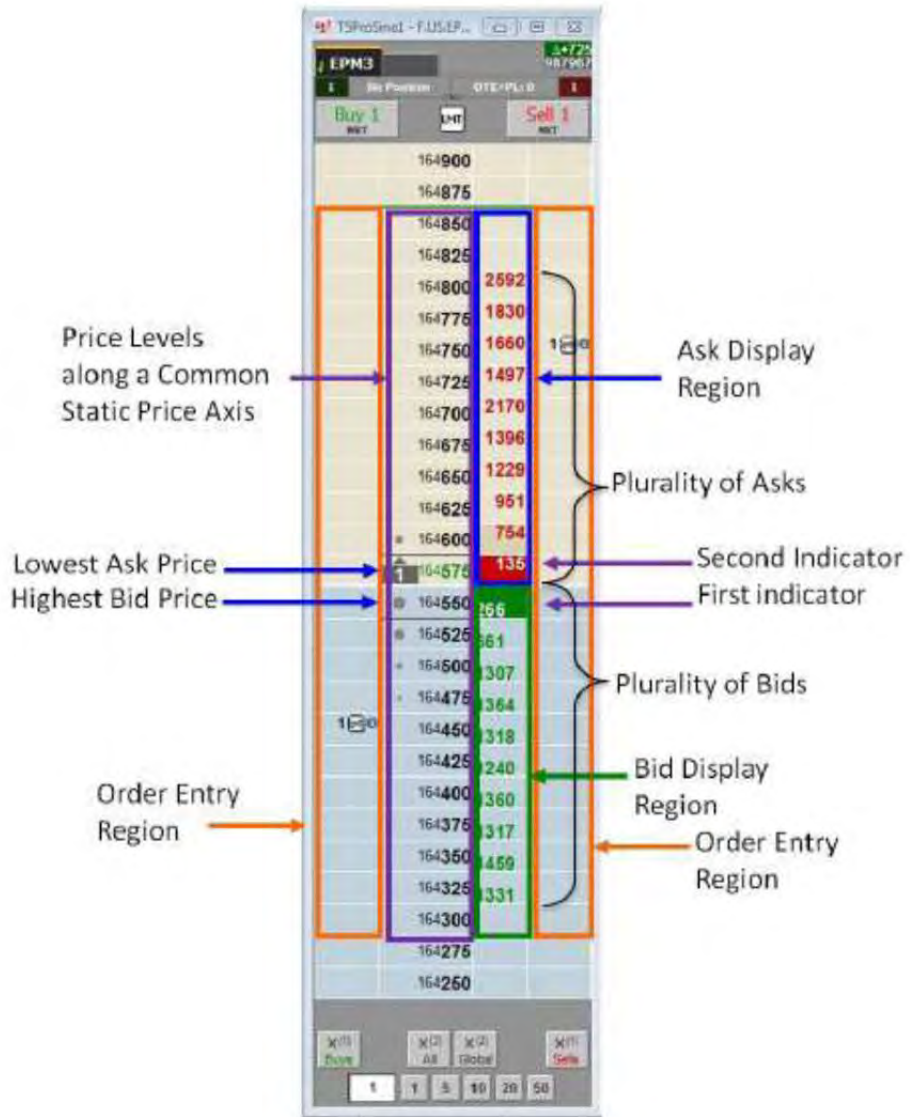
- 1) a price is selected anywhere in the DOMTrader, and
- 2) the DOMTrader is sized to be equal to or smaller than the size of the Market Window.

(Voller Decl., Ex. C at 18-19 (emphasis added.))

RESPONSE: TT admits that Paragraph 29 accurately quotes a portion of TT's Amended Final Infringement Contentions (although altering the language to include italics for emphasis), but objects to the quotation as an incomplete recitation of TT's contention and therefore denies that Paragraph 29 accurately reflects TT's contention.

30. Figures 7A, 8A, 8B, and 8C of Ex. B ('304 Claim Charts) to TT's Amended Final Infringement Contentions are depicted below.

FIGURE 7A



FIGURES 8A AND 8B

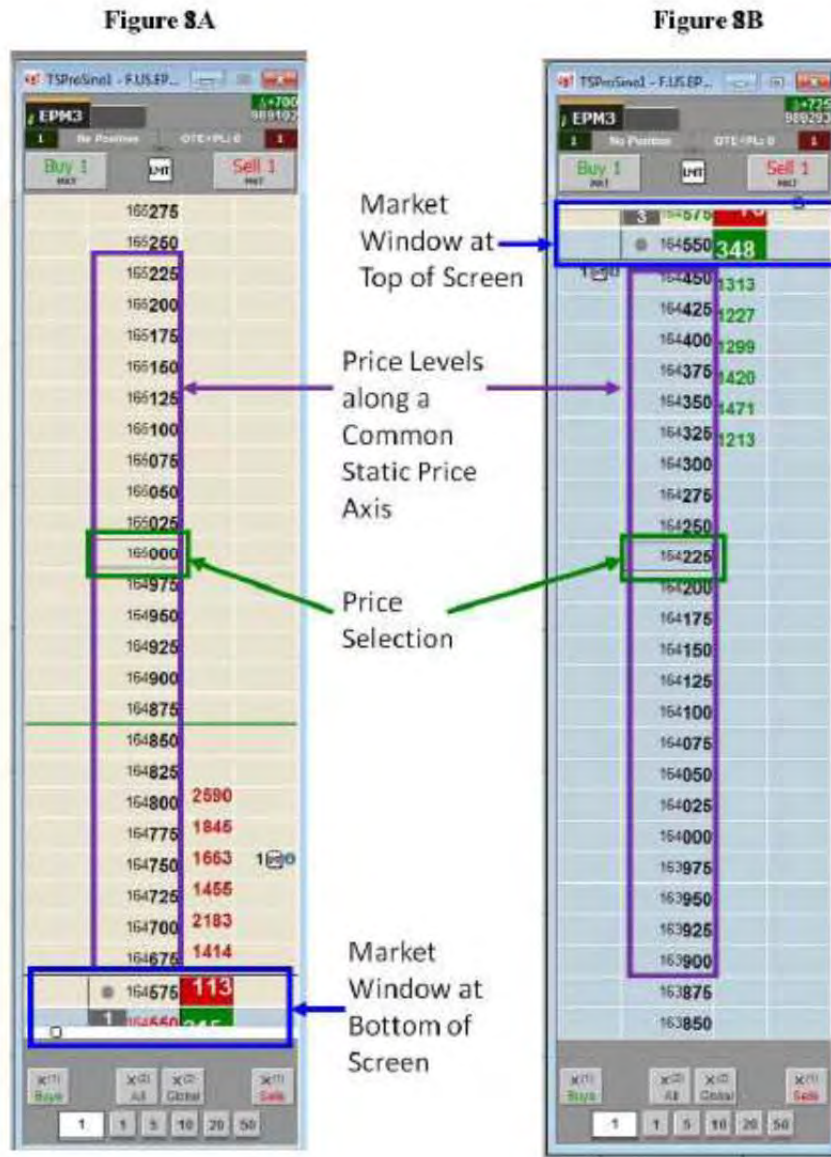
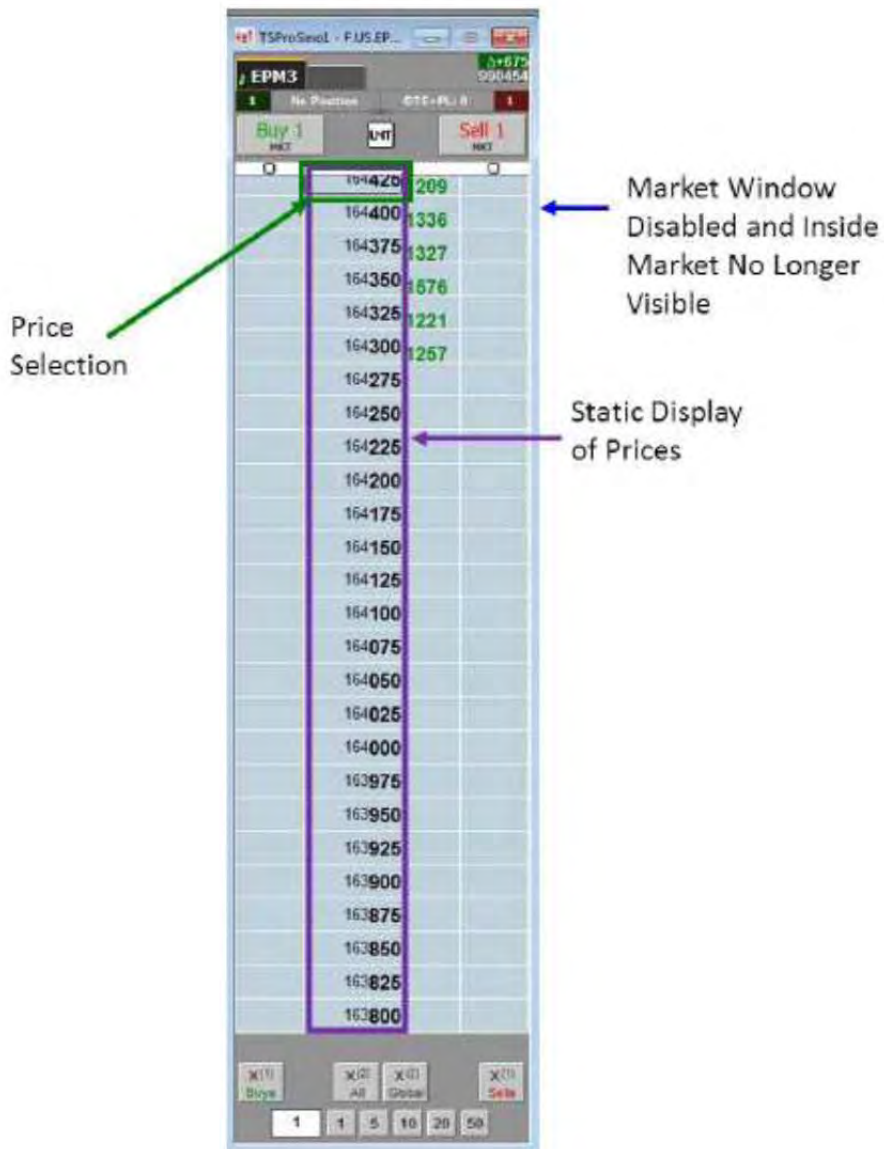


FIGURE 8C



(Voller Decl., Ex. C at Ex. B, 64, 66-67.)

RESPONSE: TT admits that Paragraph 30 accurately reproduces Figures 7A, 8A, 8B, and 8C of Ex. B ('304 Claim Charts) to TT's Amended Final Infringement Contentions.

31. Figures 7A, 8A, and 8B of Ex. B ('304 Claim Charts) to TT's Amended Final Infringement Contentions purport to illustrate a Common Static Price Axis comprising less than

all prices displayed in the price column. (Voller Decl., Ex. C at Ex. B, 64, 66.)

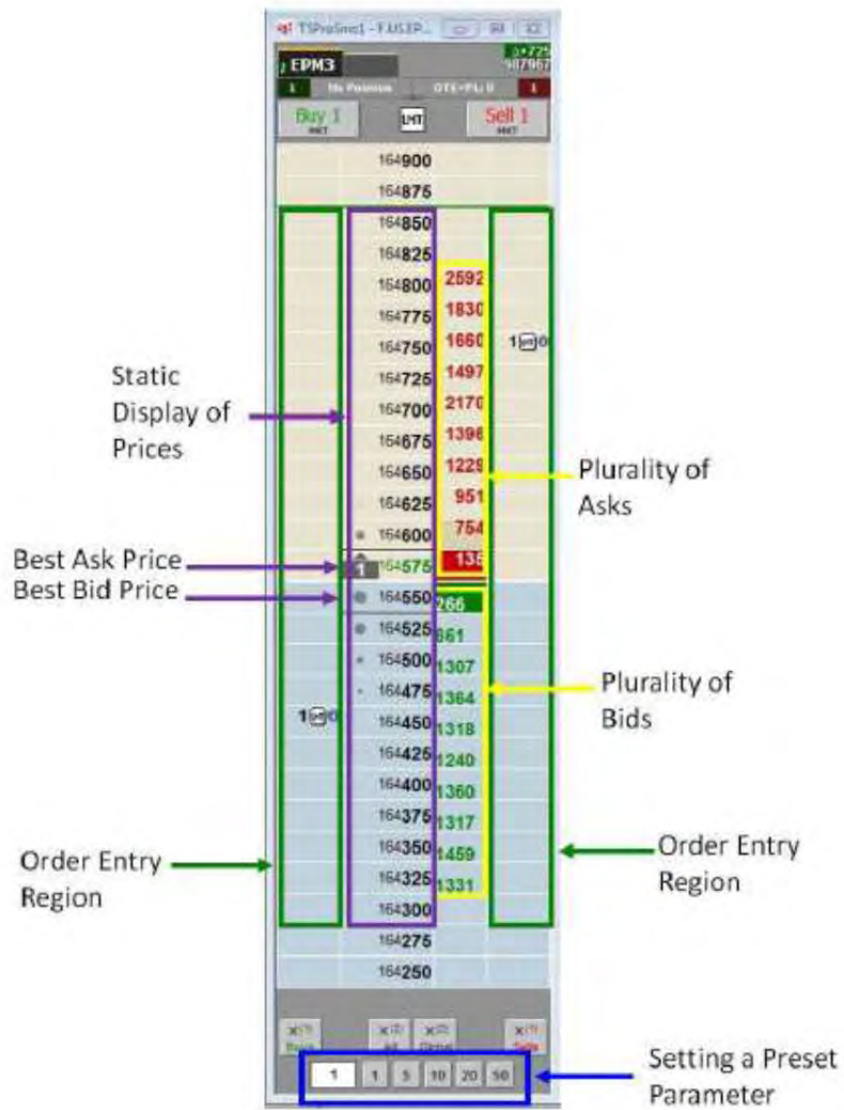
RESPONSE: TT admits that it has identified the common static price axis in Figures 7A, 8A, and 8B of the '304 claim charts to TT's Amended Final Infringement Contentions. TT admits that the price column in Figures 7A, 8A, and 8B of Ex. B has a middle zone that constitutes a "common static price axis" (in which all price levels are static) and two other non-static zones. TT denies the remaining allegations in Paragraph 31.

32. Figure 8C of Ex. B ('304 Claim Charts) TT's Amended Final Infringement Contentions purports to illustrate a Common Static Price Axis comprising all prices displayed in the price column. (Voller Decl., Ex. C at Ex. B, 67.)

RESPONSE: TT admits that Figure 8C of Exhibit B ('304 Claim Charts) of TT's Amended Final Infringement Contentions identifies the "common static price axis". In this figure, all price levels in the column are static. TT denies the remaining allegations in Paragraph 32.

33. Figures 1A, 2A, 2B, and 2C of Ex. A ('132 Claim Charts) to TT's Amended Final Infringement Contentions are depicted below.

FIGURE 1A



FIGURES 2A AND 2B

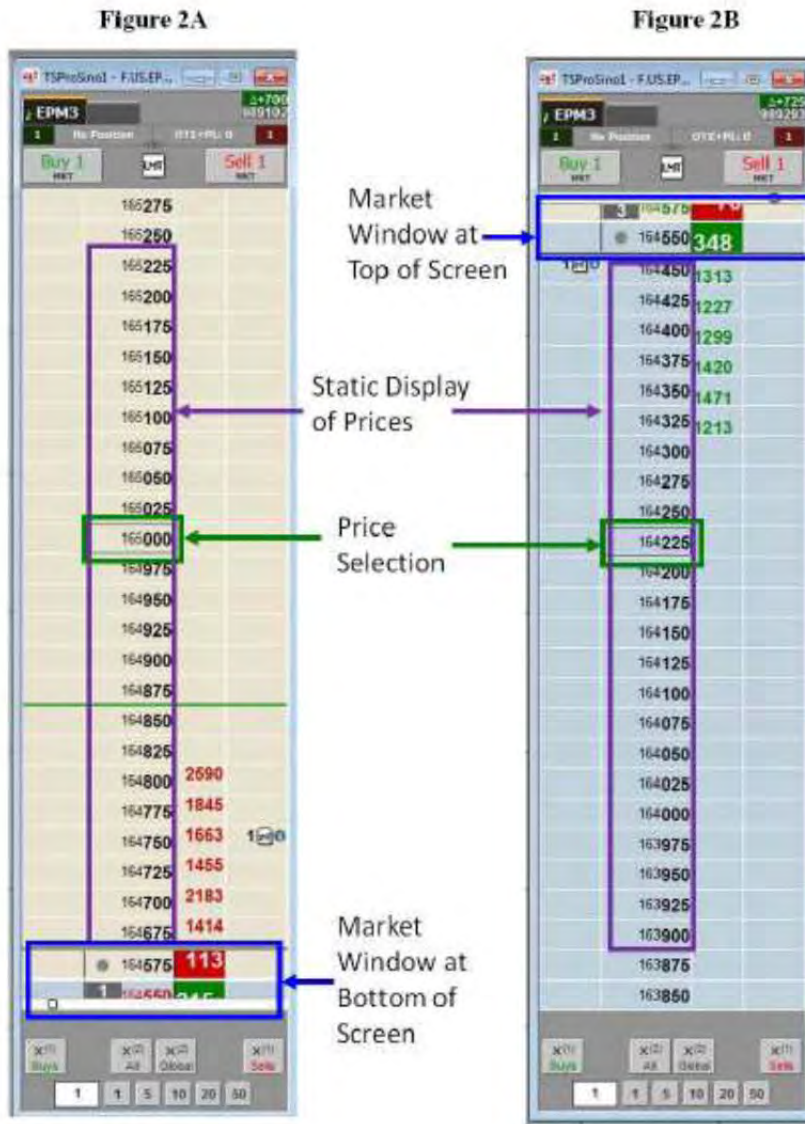
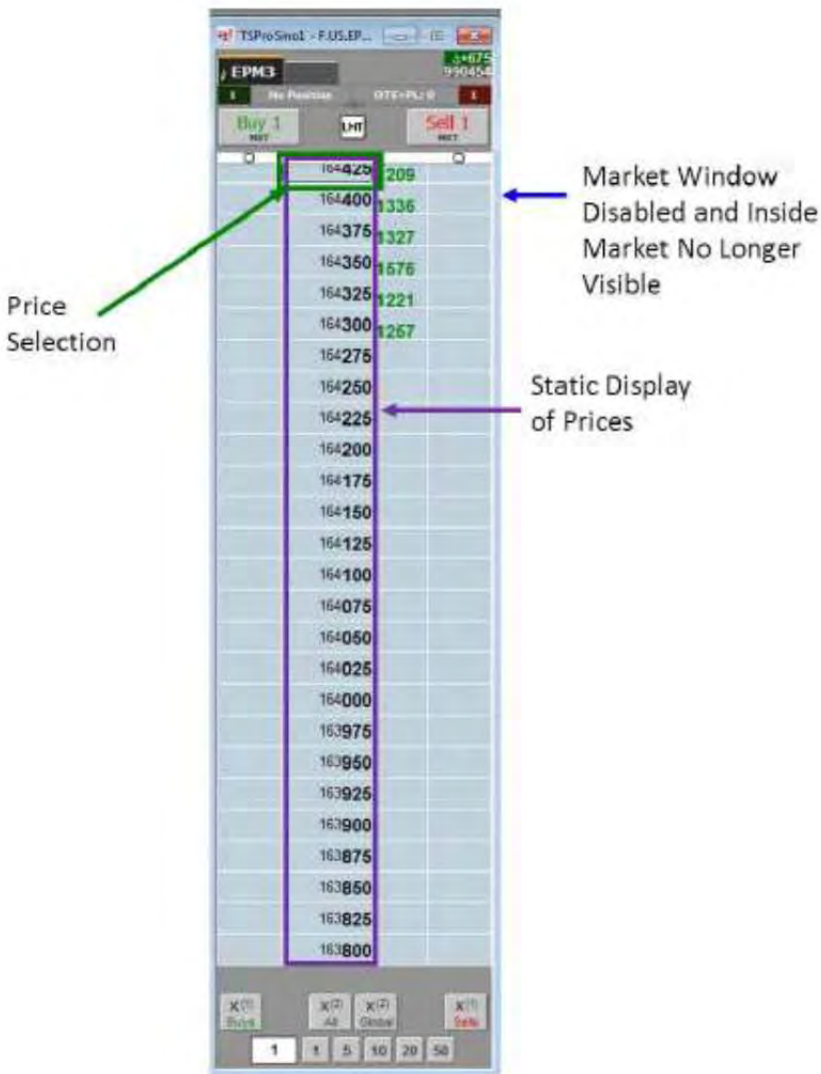


FIGURE 2C



(Voller Decl., Ex. C at Ex. A, 9, 11-12.)

RESPONSE: TT admits that Paragraph 33 accurately reproduces Figures 1A, 2A and 2B, and 2C of Ex. A ('132 Claim Charts) to TT's Amended Final Infringement Contentions.

34. Figures 1A, 2A, and 2B of Ex. A ('132 Claim Charts) to TT's Amended Final Infringement Contentions purport to illustrate a Static Display of Prices comprising less than all prices displayed in the price column. (Voller Decl., Ex. C at Ex. A, 9, 11.)

RESPONSE: TT admits that Figures 1A, 2A, 2B of Exhibit A ('132 Claim Charts) to TT's Amended Infringement Contentions identify the "static display of prices." TT admits that the price column in Figures 1A, 2A, and 2B of Exhibit A has a middle zone that constitutes a "static display of prices" (in which all price levels are static) and two other non-static zones. TT denies the remaining allegations in Paragraph 34.

35. Figure 2C of Ex. A ('132 Claim Charts) to TT's Amended Final Infringement Contentions purports to illustrate a Static Display of Prices comprising all prices displayed in the price column. (Voller Decl., Ex. C at Ex. A, 12.)

RESPONSE: TT admits that Figure 2C of Exhibit A ('132 Claim Charts) to TT's Amended Infringement Contentions identifies the "static display of prices". In this figure, all price levels in the column are static. TT denies the remaining allegations in Paragraph 35.

36. The patents-in-suit state:

Bid quantities are in the *column 1003* labeled BidQ and ask quantities are in *column 1004* labeled AskQ. The representative ticks from prices for the given commodity are shown in *column 1005*. The column, does not list the whole prices (e.g. 95.89), but rather, just the last two digits (e.g. 89). In the example shown, the *inside market, cells 1020*, is 18 (best bid quantity) at 89 (best bid price) and 20 (best ask quantity) at 90 (best ask price). In the preferred embodiment of the invention, these three columns are shown in different colors so that the trader can quickly distinguish between them.

(Voller Decl., Ex. A at col.7 ll.54-64; Voller Decl., Ex. B at col.7 ll.35-45 (emphasis added.)

RESPONSE: TT admits that Paragraph 36 quotes a portion of the patents-in-suit although altering the language to include italics for emphasis.

37. The patents-in-suit state:

As described with reference to the accompanying figures, the present invention provides a display and trading method to ensure fast and accurate execution of trades by displaying market depth on a vertical or horizontal plane, which fluctuates logically up or down, left or right across the plane as the market prices fluctuates. This allows the trader to place trade orders quickly and efficiently. *A commodity's market depth is the current bid and ask prices and quantities in the market.* The display and trading method of the invention increase the likelihood that the trader will be able to execute orders at desirable prices and quantities.

(Voller Decl, Ex. A at col.3 ll.57-67; Voller Decl., Ex. B at col.3 ll.53-63 (emphasis added).)

RESPONSE: TT admits that Paragraph 37 quotes a portion of the patents-in-suit although altering the language to include italics for emphasis.

38. During the February 19, 2014 tutorial hearing before Judge Ellis in the co-pending case between TT and GL Trade and SunGard (Case No. 05-cv-4120), counsel for TT represented to the Court that:

This case is about one part of that screen, the screen they use to handle and manage orders, and that's our MB Trader. *The case again is not about technology at the exchanges or complex technology, what I call beyond the screen or under the hood of the computer,* for example, how data is updated or processed in the computer. Really, *once some basic trading terms are understood, the technology is relatively simple to understand.*

* * *

You can see the market through these indicators moving up and down like a thermometer. In fact, the patent uses the word "mercury" to make an analogy a thermometer. Obviously, the scale here, the only scale is price, so the movement up and down reflects price changes.

(Voller, Decl., Ex. E at 8:10-17; 18:16-22 (emphasis added.))

RESPONSE: TT admits that Paragraph 38 quotes portions of the transcript from the

February 19, 2014 tutorial hearing before Judge Ellis in the co-pending case between TT and GL Trade and SunGard (Case No. 05-cv-4120) although altering the transcript to include italics for emphasis.

39. The patents-in-suit state: “For a commodity being traded, the ‘inside market’ is the highest bid price and the lowest ask price.” (Voller Decl., Ex. A at col.4 ll.58-60; Voller Decl., Ex. B at col.4 ll.58-60.)

RESPONSE: TT admits that Paragraph 39 quotes a portion of the patents-in-suit.

40. The patents-in-suit state: “Row 1 represents the ‘inside market’ for the commodity being traded which is the best (highest) bid price and quantity and the best (lowest) ask price and quantity.” (Voller Decl., Ex. A at col.5 ll.19-22; Voller Decl., Ex. B at col.5 ll.16-19.)

RESPONSE: TT admits that Paragraph 40 quotes a portion of the patents-in-suit.

41. The patents-in-suit state:

successful markets strive to have such a high volume of trading that any trader who wishes to enter an order will find a match and have the order filled quickly, if not immediately. In such liquid markets, the prices of the commodities fluctuate rapidly. On a trading screen, this results in rapid changes in the price and quantity fields within the market grid. If a trader intends to enter an order at a particular price, but misses the price because the market prices moved before he could enter the order, he may lose hundreds, thousands, even millions of dollars. The faster a trader can trade, the less likely it will be that he will miss his price and the more likely he will make money.

* * *

The "Mercury" display and trading method of the present invention ensure fast and accurate execution of trades by displaying market

depth on a vertical or horizontal plane, which fluctuates logically up or down, left or right across the plane as the market prices fluctuates. *This allows the trader to trade quickly and efficiently.*

* * *

As described with reference to the accompanying figures, the present invention provides a display and trading method to ensure fast and accurate execution of trades by displaying market depth on a vertical or horizontal plane, which fluctuates logically up or down, left or right across the plane as the market prices fluctuates. This allows the trader to place trade orders quickly and efficiently. A commodity's market depth is the current bid and ask prices and quantities in the market. *The display and trading method of the invention increase the likelihood that the trader will be able to execute orders at desirable prices and quantities.*

* * *

As described herein, the display and trading method of the present invention provide the user with certain advantages over systems in which a display of market depth, as shown in FIG. 2, is used. The Mercury display and trading method of the present invention ensure fast and accurate execution of trades by displaying market depth on a vertical or horizontal plane, which fluctuates logically up or down, left or right across the plane as the market prices fluctuates. *This allows the trader to trade quickly and efficiently. An example of such a Mercury display is illustrated in the screen display of FIG. 3.*

(Voller Decl., Ex. A at col.2 ll.55-67, col.3 ll.9-14, 57-67, col.7 ll.16-26; Voller Decl., Ex. B at col.2 ll.51-63, col.3 ll.5-10, 53-62, col.6 l.65-col.7 l.5 (emphasis added.))

RESPONSE: TT admits that Paragraph 41 quotes portions of the patents-in-suit although altering the language to include italics for emphasis.

42. The March 17, 2014 Declaration of Dr. Mellor states that the:

person having ordinary skill in the relevant art (“PHOSITA”) is a person having (1) a bachelor’s degree in computer science, computer engineering, or electrical engineering or equivalent

experience, (2) two years of experience programming GUIs, and (3) general knowledge of trading and electronic trading.

(“Dr. Mellor’s PHOSITA Definition”). (Voller Decl., Ex. D at ¶ 25.)

RESPONSE: TT admits that Paragraph 42 quotes a portion of the March 16, 2014 Declaration of Dr. Mellor.¹²

43. The March 17, 2014 Declaration of Dr. Mellor states that Dr. Mellor “possess[es] more than the level of ordinary skill in the art [under Dr. Mellor’s PHOSITA Definition] and [that Dr. Mellor] can offer helpful testimony in this case regarding the perspective of this hypothetical person. (Voller Decl., Ex. D at ¶ 25; *see* Voller Decl., Ex. D at ¶¶ 71-107.)

RESPONSE: TT admits that Paragraph 43 quotes a portion of the March 16, 2014 Declaration of Dr. Mellor although altering the language as shown in the brackets.

44. The March 17, 2014 Declaration of Dr. Mellor states that:

the '132 and '304 patents do not provide written description support for TT’s Static Interpretation. In other words, the inventors at the time of the filing date were not in possession of a graphical user interface having a price column where some displayed price levels are static, and other displayed price levels are dynamic. Instead, the inventors were in possession of a graphical user interface with only a single price column where all displayed prices in the graphical user interface are static, other than in response to a manual re-centering command.

* * *

there is no support for TT’s Static Interpretation. The inventors were

¹ TT notes that it is not aware of any declaration of Dr. Mellor dated March 17, 2014. TT assumes this is a typographical error, and will treat all such references throughout this document as referring to the March 16, 2014 declaration of Dr. Mellor.

² Because CQG only requests that TT admit or deny the fact that Dr. Mellor’s declaration includes a given paragraph, TT does not address any of the underlying assertions within Dr. Mellor’s declaration throughout the statement of facts. TT’s admissions only go to the “fact” that Dr. Mellor made such statements in his declaration.

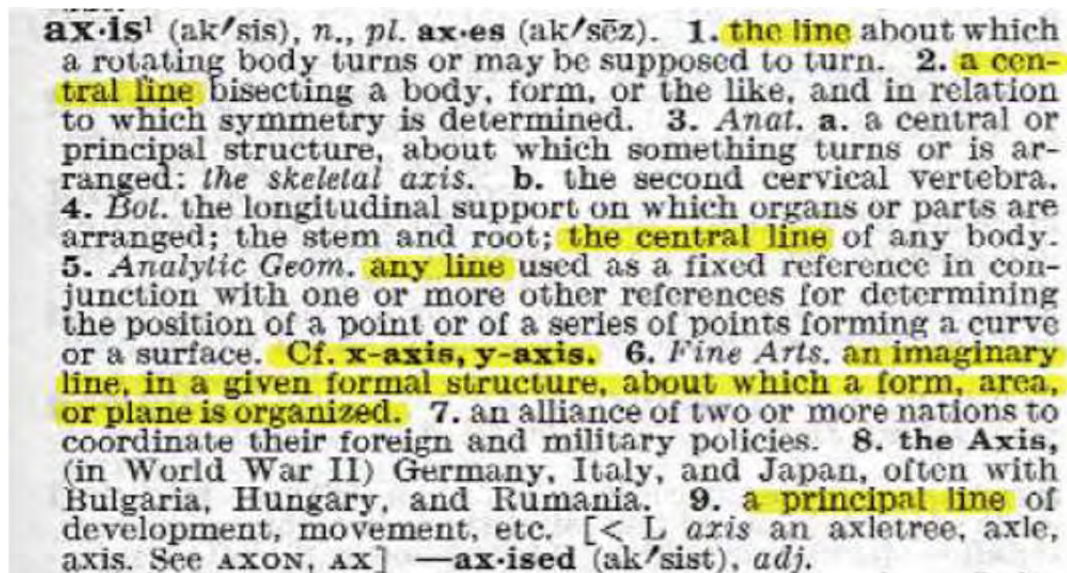
not in possession of a graphical user interface with a price column where only some, but not all, displayed price levels are static. Instead, the inventors were only in possession of a graphical user interface with a price column where all prices displayed in the column are static. Accordingly, TT's Static Interpretation does not meet the written description requirement of the patent law.

(Voller Decl., Ex. D at ¶¶ 26, 108.)

RESPONSE: TT admits that Paragraph 44 quotes portions of the March 16, 2014

Declaration of Dr. Mellor.

45. The 1980 Random House College Dictionary defines the term "axis" as:



ax·is¹ (ak/sis), *n.*, *pl.* **ax·es** (ak/sēz). 1. **the line** about which a rotating body turns or may be supposed to turn. 2. **a central line** bisecting a body, form, or the like, and in relation to which symmetry is determined. 3. *Anat.* **a.** a central or principal structure, about which something turns or is arranged: *the skeletal axis*. **b.** the second cervical vertebra. 4. *Bot.* the longitudinal support on which organs or parts are arranged; the stem and root; **the central line** of any body. 5. *Analytic Geom.* **any line** used as a fixed reference in conjunction with one or more other references for determining the position of a point or of a series of points forming a curve or a surface. **Cf. x-axis, y-axis.** 6. *Fine Arts.* **an imaginary line, in a given formal structure, about which a form, area, or plane is organized.** 7. an alliance of two or more nations to coordinate their foreign and military policies. 8. **the Axis**, (in World War II) Germany, Italy, and Japan, often with Bulgaria, Hungary, and Rumania. 9. **a principal line** of development, movement, etc. [*< L axis* an axletree, axle, axis. See **AXON, AX**] —**ax-ised** (ak/sist), *adj.*

(Voller Decl., Ex. D at ¶ 28 (emphasis added.))

RESPONSE: TT admits that Paragraph 45 quotes from the 1980 Random House College Dictionary (although adding highlighting). TT denies that this dictionary definition defines the word "axis" as it is used in the claims of the patents-in-suit.

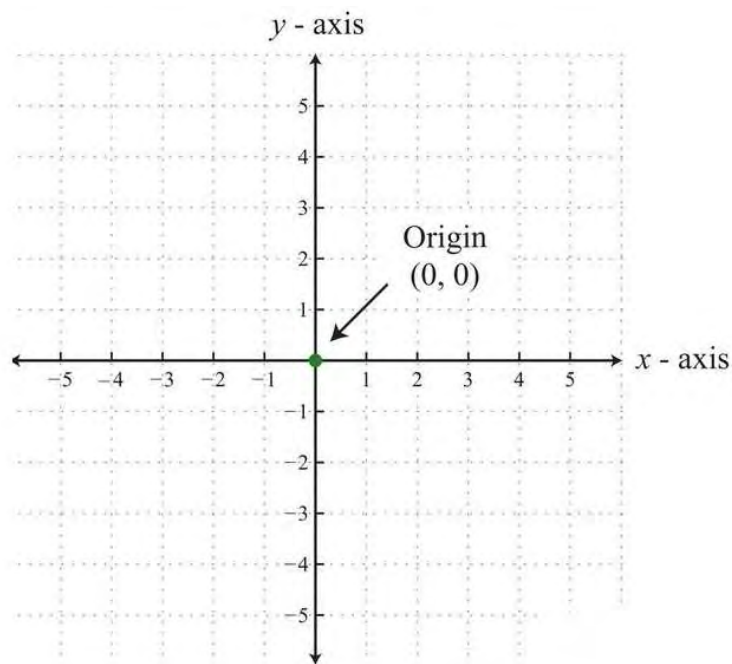
46. The plain and ordinary meaning of the term "axis" is a line. (Voller Decl. at ¶ 28.)

RESPONSE: TT denies that the plain and ordinary meaning of the term "axis" is merely

a line. Indeed, even the dictionary definition cited by Dr. Mellor does not define “axis” as merely a line.

47. The March 17, 2014 Declaration of Dr. Mellor states that:

A PHOSITA would agree that an axis is a line. With a strong background in mathematics including Euclidean geometry, algebra, and calculus, the PHOSITA would have a preconceived understanding of the term “axis” as a line from negative infinity to positive infinity. Anyone who has taken high school algebra would recognize that a line, unlike a line segment, is unbounded and goes on in both directions forever. A classic example of axes in algebra are the x- and y-axes depicted below:



Collectively, both the dictionary definition, and the mathematical definition known to both high school students and the PHOSITA suggests that the inventors were only in possession of a graphical user interface that included all visible prices along the line or axis.

(Voller Decl., Ex. D at ¶ 28.)

RESPONSE: TT admits that Paragraph 47 quotes the March 16, 2014 Declaration of Dr. Mellor.

48. The 1980 Random House College Dictionary defines the term “common” as:

com-mon (kəm'ən), *adj.* 1. belonging equally to or shared alike by two or more or all in question: *common property; common interests.* 2. pertaining or belonging equally to an entire community, nation, or culture; public: *a common language.* 3. joint; **united**: *a common defense.* 4. widely and unfavorably known; notorious: *a common thief.* 5. **widespread; general**: *common knowledge.* 6. of frequent occurrence; usual; familiar: *a common mistake.* 7. hackneyed; trite. 8. of mediocre or inferior quality; mean; low: *a rough-textured suit of the most common fabric.* 9. coarse or vulgar: *common manners.* 10. having no rank, station, distinction, etc.; ordinary: *a common soldier.* 11. *Anat.* forming or formed by two or more parts or branches: *the common carotid arteries.* 12. *Pros.* (of a syllable) able to be considered as either long or short. 13. *Gram.* a. not belonging to an inflectional paradigm; fulfilling different functions which in some languages require different inflected forms: *English nouns are in the common case whether used as subject or object.* b. constituting a gender comprising nouns that were formerly masculine or feminine: *Swedish nouns are either common or neuter.* c. noting a word that may refer to either a male or a female. 14. *Math.* bearing a similar relation to two or more entities. —*n.* 15. Often, **commons**, a tract of land owned or used jointly by the members of a community, usually a pasture or a park. 16. *Law.* the right or liberty, in common with other persons, to take profit from the land or waters of another. 17. **commons**, a. the commonalty; the nonruling class. b. the body of people not of noble birth or not ennobled, as represented in England by the House of Commons. c. (*cap.*) the representatives of this body. d. (*cap.*) the House of Commons. e. a large dining room, esp. at a university or college. f. *Brit.* food provided in such a dining room. g. food or provisions for any group. 18. (*sometimes cap.*) *Eccles.* a. an office or form of service used on a festival of a particular kind. b. the ordinary of the Mass, esp. those parts sung by the choir. 19. *Obs.* a. the community or public. b. the common people. 20. **in common**, in joint possession or use; shared equally. [ME *comun* < OF < L *commun(is)* = *com-* *com-* + *mūnis* serviceable, obliging, akin to MEAN²] —*com'mon-ness*, *n.* —**Syn.** 5. **universal**, prevalent, popular. See **general**. 6. **customary**, everyday. 10. **COMMON**, **VULGAR**, **ORDINARY** refer, often with derogatory connotations of cheapness or inferiority, to what is usual or most often experienced. **Common** applies to what is accustomed, usually experienced, or inferior, to the opposite of what is exclusive or aristocratic: *She is a common person.* **VULGAR** properly means belonging to the people, or characteristic of common people; it connotes low taste, coarseness, or ill breeding: *the vulgar view of things; vulgar in manners and speech.* **ORDINARY** means what is to be expected in the usual order of things; or only average, or below average: *That is a high price for something of such ordinary quality.* —**Ant.** 1. individual, private, personal. 6. unusual, strange.

(Voller Decl., Ex. D at ¶ 31 (emphasis added.))

RESPONSE: TT admits that Paragraph 48 quotes from the 1980 Random House College Dictionary (although altering the language to include highlighting). TT denies that this dictionary definition defines the word “common” as used in the claims of the patents-in-suit.

49. Webster's Collegiate Thesaurus from 1998 provides the following entry for the term "common":

common *adj* **1** generally shared in or participated in by members of a community <our *common* civic responsibilities >
syn communal, conjoint, conjunct, intermutual, joint, mutual, public, shared
rel general, generic, universal; like, reciprocal, similar; corporate
con personal, private, restricted
ant individual
2 *syn* GENERAL 2, generic, **universal**
rel popular, public
3 *syn* IMPURE 3, defiled, desecrated, polluted, profaned, unclean
4 taking place often <a *common* occurrence >
syn customary, everyday, familiar, frequent
rel repetitious, routine, usual
con infrequent, occasional, unfrequent; casual, chance, incidental
ant rare, uncommon
5 *syn* GENERAL, commonplace, matter-of-course, natural, normal, prevalent, regular, typic, typical, usual
6 conforming to a type without noteworthy excellences or faults <just a *common* everyday sort trying to get by in life >
syn commonplace, ordinary, prosaic, uneventful, unexceptional, unnoteworthy
rel down-to-earth, matter-of-fact, prosy, unexciting; dull, flat, trite, stale, uninteresting
con exceptional, noteworthy, remarkable; excellent, marvelous, prodigious, wonderful; aberrant, divergent, eccentric
ant extraordinary
7 *syn* DECENT 4, adequate, all right, good, satisfactory, sufficient, tolerable, unexceptionable, unexceptional, unimpeachable
8 *syn* CHEAP 2, mean, ||ornery, paltry, poor, rubbishy, shoddy, sleazy, tatty, trashy
9 *syn* INFERIOR 2, déclassé, hack, low-grade, mean, poor, second-class, second-drawer, second-rate
10 *syn* EASYGOING 3, breezy, casual, informal, low-pressure, relaxed, ||sonsy, unconstrained, unfussy, unreserved

(Voller Decl., Ex. D at ¶ 33 (emphasis added.))

RESPONSE: TT admits that Paragraph 49 quotes from the Webster's Collegiate

Thesaurus from 1998 (although altering the language to include highlighting). TT denies that this excerpt from this Thesaurus defines the word “common” as it is used in the claims of the patents-in-suit.

50. The March 17, 2014 Declaration of Dr. Mellor states that:

The plain and ordinary meaning of the word “common” also suggests that the inventors were only in possession of a graphical user interface having a universal static price axis or line. In other words, all prices displayed along the axis are static.

* * *

A PHOSITA would therefore expect that the term “common” as a modifier for the term “static price axis” must have some unique meaning. And, a PHOSITA, with an appropriate technical background, would necessarily understand that “common” means “universal.” This understanding is confirmed by the contemporaneous dictionary definition of the word “common.”

* * *

The layperson’s definition of the term “common” is supported by the accepted engineering definition of the same term. Because a PHOSITA would likely hold a bachelor’s degree in computer science, computer engineering, or electrical engineering, this person would have a basic understanding of electrical circuits and electronics through their physics or introductory sequence courses to electric circuits. And, contemporaneous course books in electric circuits from 1998 and 1999 demonstrate that the ground terminal—a feature of all properly-designed electric circuits—is often called the “common ground” because it is a reference node against which voltages can be measured. The ground or common ground terminal is a universal reference node, which in real-life systems may be grounded to the earth itself.

* * *

All together, the claims of the ’304 patent suggest that the inventors were only in possession of a line of prices where all prices along the line are static.

(Voller Decl., Ex. D at ¶¶ 29, 31, 34, 35.)

RESPONSE: TT admits that Paragraph 50 quotes portions of the March 16, 2014

Declaration of Dr. Mellor.

51. The March 17, 2014 Declaration of Dr. Mellor states that:

the claim term “static display of prices” [in the ’132 patent] simply suggests that the graphical user interface displays prices and that all visible prices in the display are static. Without turning to the remainder of the claim or the remainder of the patent, the PHOSITA would understand that the inventors were in possession of a graphical user interface where all displayed prices were static.

(Voller Decl., Ex. D at ¶ 36.)

RESPONSE: TT admits that Paragraph 51 quotes portions of the March 16, 2014

Declaration of Dr. Mellor.

52. The March 17, 2014 Declaration of Dr. Mellor states that:

the claim term “static display of prices” [in the ’132 patent] simply suggests that the graphical user interface displays prices and that all visible prices in the display are static. Without turning to the remainder of the claim or the remainder of the patent, the PHOSITA would understand that the inventors were in possession of a graphical user interface where all displayed prices were static.

(Voller Decl., Ex. D at ¶ 36.)

RESPONSE: TT admits that Paragraph 52 quotes portions of the March 16, 2014

Declaration of Dr. Mellor.

53. The March 17, 2014 Declaration of Dr. Mellor states that:

With one exception, the inventors did not use the phrase “common static price axis” or “static display of prices” in describing the Mercury display. Instead, the inventors used the term “price column” and the figures show price column 1005 (Fig. 3) and price column 1203 (Fig. 5). (Ex. 2 at col. 7, ll. 48-67 (CQG014190865) (generally describing the invention as a static vertical column of prices or price column, and referring to price column 1005 in Fig. 3); col. 10, ll. 38-39 (CQG014190866) (referring to price column 1203 in Fig. 5); Figs. 3 and 5 (CQG014190858 and CQG014190860).) The above-cited portions of the patent application are depicted below with emphasis added in yellow highlighting.

a. From Ex. 2 at Column 7, '304 Patent:

The Mercury display overcomes this problem in an innovative and logical manner. Mercury also provides an order entry system, market grid, fill window and summary of market orders in one simple window. Such a condensed display materially simplifies the trading system by entering and tracking trades in an extremely efficient manner. Mercury displays market depth in a logical, vertical fashion or horizontally or at some other convenient angle or configuration. A vertical field is shown in the figures and described for convenience, but the field could be horizontal or at an angle. In turn, Mercury further increases the speed of trading and the likelihood of entering orders at desired prices with desired quantities. In the preferred embodiment of the invention, the Mercury display is a static vertical column of prices with the bid and ask quantities displayed in vertical columns to the side of the price column and aligned with the corresponding bid and ask prices. An example of this display is shown in FIG. 3.

Bid quantities are in the column 1003 labeled BidQ and ask quantities are in column 1004 labeled AskQ. The representative ticks from prices for the given commodity are shown in column 1005. The column, does not list the whole prices (e.g. 95.89), but rather, just the last two digits (e.g. 89). In the example shown, the inside market, cells 1020, is 18 (best bid quantity) at 89 (best bid price) and 20 (best ask quantity) at 90 (best ask price). In the preferred embodiment of the invention, these three columns are shown in different colors so that the trader can quickly distinguish between them.

The values in the price column are static; that is, they do not normally change positions unless a re-centering command is received (discussed in detail later). The values in the

b. From Ex. 2 at Column 7, '304 Patent:

Using the screen display and values from FIG. 5, the placement of trade orders using the Mercury display and trading method is now described using examples. A left click on the 18 in the BidQ column 1201 will send an order to market to buy 17 lots (quantity #chosen on the Quantity Description pull down menu cell 1204) of the commodity at a price of 89 (the corresponding price in the Prc column 1203). Similarly, a left click on the 20 in the AskQ column 1202 will send an order to market to sell 17 lots at a price of 90.

Figures 3 and 5 illustrate images of the Mercury display. (Ex. 2 at col. 3, ll. 45-51 (CQG014190863).) The figures are depicted below with a red box illustrating price column 1005 and price column 1203.

c. Ex. 2 at Figures 3 and 5, '304 Patent:

FIG. 3

SYCOM FGBL DEC99						
E/W	10:48:44	BidQ	AskQ	Prc	LTQ	
L	3		104	99		
R	5		24	98		
	720		33	97		
X	10		115	96		
	0		32	95		
	10 1H		27	94		
	50 3H		63	93		
S 0 W 24	1K 5H		45	92		
S 0 W 7	CLR		28	91		
X	10		20	90	10	
	17		18	89		1020
B 0 W 15	CXL		97	88		
B 0 W 13	+ -		30	87		
	NET 0		43	86		
B 0 W 17	NET REAL		110	85		
			23	84		
			31	83		
			125	82		
			21	81		

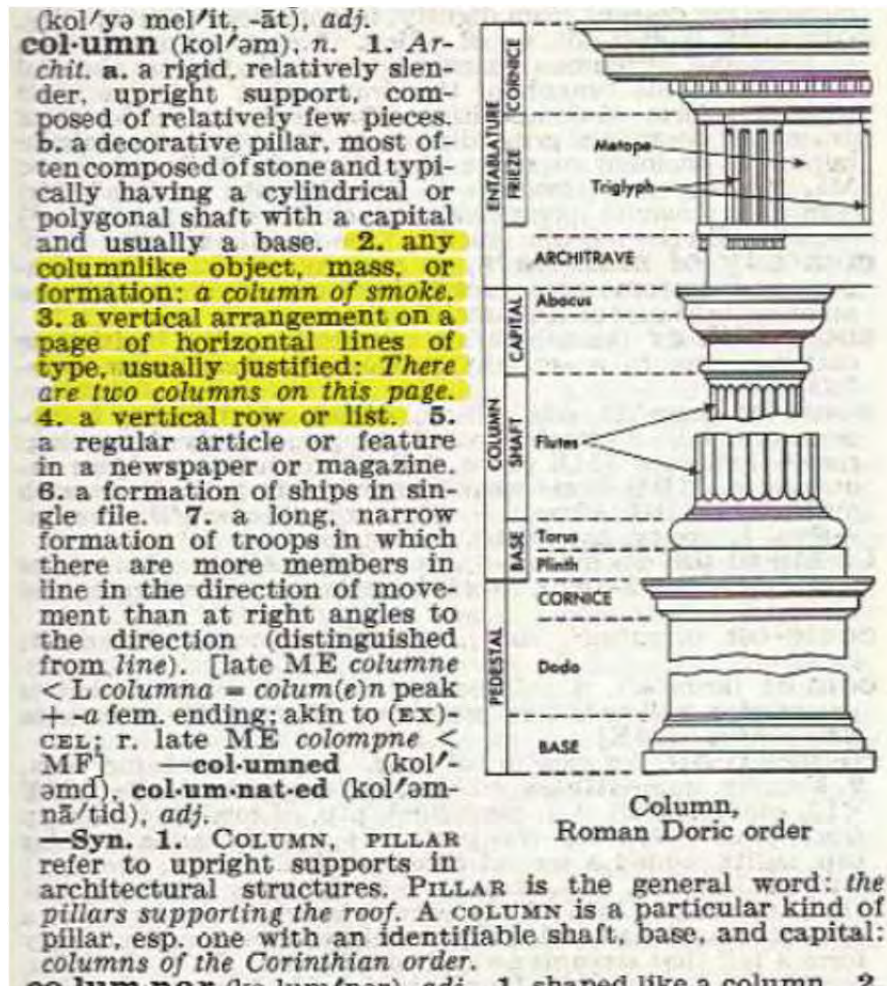
FIG. 5

SYCOM FGBL DEC99						
E/W	10:48:44	BidQ	AskQ	Prc	LTQ	
L	3		104	99		
R	5		24	98		
	720		33	97		
X	10		115	96		
	0		32	95		
	10 1H		27	94		
	50 3H		63	93		
S 0 W 24	1K 5H		45	92		
S 0 W 7	CLR		28	91		
X	10		20	90	10	
	17		18	89		1204
B 0 W 15	CXL		97	88		
B 0 W 13	+ -		30	87		
	NET 0		43	86		
B 0 W 17	NET REAL		110	85		
			23	84		
			31	83		
			125	82		
			21	81		

(Voller Decl., Ex. D at ¶¶ 39-40.)

RESPONSE: TT admits that Paragraph 53 quotes portions of the March 16, 2014 Declaration of Dr. Mellor.

54. The 1980 Random House College Dictionary defines the term “column” as:



(Voller Decl., Ex. E at ¶ 4 1) (emphasis added).

RESPONSE: TT admits that Paragraph 54 quotes from the 1980 Random House College Dictionary (although altering the language to include highlighting).

55. The March 17, 2014 Declaration of Dr. Mellor states that:

Collectively, the PHOSITA would recognize that the disclosure

and figures confirm what the claims suggest: the inventors were only in possession of a graphical user interface where all prices in a price column are static. As depicted in the figures, the column includes all—not just some—of the prices that make up the column. And this comports with the well-established definition of “column” replicated below from the 1980 edition of The Random House College Dictionary.

(Voller Decl., Ex. E at ¶ 41.)

RESPONSE: TT admits that Paragraph 55 quotes a portion of the March 16, 2014

Declaration of Dr. Mellor.

56. The March 17, 2014 Declaration of Dr. Mellor states that:

The brief disclosure provides only two examples of movement in the Mercury display during operation. The first example refers to Figures 3 and 4 and shows relative movement of the dynamic indicators 1003, 1004, and thus the inside market 1020, 1101, against a static price column 1005, 1203. The inventors explain and the figures demonstrate that the entirety of the price column in Figures 3 and 4 remains static while the corresponding bids and asks move up the price column. (Ex. 2 at col. 9, ll. 10-13 (CQG014190866); *id.* at Figs. 3-4 (CQG014190858-59) (*see* above).) The relevant text from the disclosure is depicted below with emphasis added.

a. From Col. 9, '304 patent:

The inside market and market depth ascend and descend as prices in the market increase and decrease. For example, FIG. 4 shows a screen displaying the same market as that of FIG. 3 but at a later interval where the inside market, cells 1101, has risen three ticks. Here, the inside market for the commodity is 43 (best bid quantity) at 92 (best bid price) and 63 (best ask quantity) at 93 (best ask price). In comparing FIGS. 3 and 4, it can be seen that the price column remained static, but the corresponding bids and asks rose up the price column. Market Depth similarly ascends, and descends the price column, leaving a vertical history of the market.

This first example supports my understanding that the PHOSITA would understand that all prices in the price column must be static as illustrated in Figures 3 and 4 and described by the inventor in

column 9 of the disclosure. The inventors were careful to explain and illustrate that *all* prices in the price column are static. Accordingly, there is no support for TT's Static Interpretation. The second example explains why a manual re-centering command is necessary. According to the inventors, there is a problem with the static column of the Mercury display. The inventors recognized that as the inside market climbs or descends the price column, it might go above or below the price column displayed on the trader's screen. And, this is a problem because traders want to see the inside market to assess future trades. According to the inventors, the invention overcomes this problem with a one-click centering feature that will re-center the inside market on the trader's screen. (Ex. 2 at col. 9, ll. 15-26 (CQG014190866).) The disclosure regarding this problem is depicted below with highlighted text for emphasis.

b. From Ex. 2 at Col. 9, '304 Patent:

As the market ascends or descends the price column, the
inside market, might go above or below the price column
displayed on a trader's screen. Usually a trader will want to
be able to see the inside market to assess future trades. The
system of the present invention addresses this problem with
a one click centering feature. With a single click at any point
within the gray area, 1021, below the "Net Real" button, the
system will re-center the inside market on the trader's
screen. Also, when using a three-button mouse, a click of the
middle mouse button, irrespective of the location of the
mouse pointer, will re-center the inside market on the
trader's screen.

This example further supports my opinion that the inventors envisioned a system where all displayed prices are static. Because the static price column allows the inside market to disappear off the screen, the patent requires a one-click re-centering technique to re-center the inside market on the trader's screen. I understand that the one-click re-centering technique is the claimed manual re-centering command identified by the Federal Circuit.

If the inventors were in possession of an invention with TT's Static Interpretation, as suggested by TT, it would not have needed a one-click re-centering technique. Yet, the inventors expressly defined their invention by reference to this problem and the need for the one-click re-centering technique. Accordingly, the inventors were only in possession of a graphical user interface where all prices in a price column are static.

(Voller Decl., Ex. E. at ¶¶ 46-50.)

RESPONSE: TT admits that Paragraph 56 quotes portions of the March 16, 2014

Declaration of Dr. Mellor.

57. The March 17, 2014 Declaration of Dr. Mellor states that:

In addition to only using the term “price column,” the inventors used reference numerals to identify various components of the grid identified as the Mercury display depicted in Figures 3 and 5. When referring to an entire column of the Mercury display grid (and not just a cell or less than all cells in a column), the inventors were presumably careful to use horizontal curly brackets. Notably, the Mercury display’s price column depicted in both Figures 3 and 5 is identified using a horizontal curly bracket located immediately below the relevant column. The horizontal curly bracket associated with numeral 1005 points to the *entirety* of the column entitled “Prc” in Figure 3, and the horizontal curly bracket associated with numeral 1203 points to the *entirety* of the column entitled “Prc” in Figure 5.

In contrast, whenever the inventors were pointing to components of the Mercury display grid that made up less than an entire column, the inventors carefully used vertical curly brackets. For example, the inventors identified the inside market—which generally does not include all prices in the price column—using a vertical curly bracket. In Figure 3, vertical curly bracket 1020 points to the inside market, and in figure 4, vertical curly bracket 1101 points to the inside market. (Ex. 2 at col. 4, ll. 63-65 (CQG014190863) (defining the inside market as the highest bid price and the lowest ask price); *id.* at col. 9, ll. 8-10 (CQG014190866) (identifying the inside market as 92 and 93).) The inventors also used vertical curly brackets associated with numerals 1007 and 1008 to identify entered and working orders. (Ex. 2 at col. 8, ll. 22-36 (CQG014190865).)

Marked up Figures 3-5, representative of the Mercury display at different moments in time, are re-printed below with red boxes surrounding the horizontal curly brackets identifying price columns 1005 and 1203, and blue boxes surrounding vertical curly brackets identifying the inside market 1020 and 1101, and entered and working orders 1007 and 1008. (Ex. 2 at col. 3, ll. 45-51 (CQG014190863) (describing the drawings depicted in Figures 3-

FIG. 5

SYCOM FGBL DEC99					
E/W	10:48:44	BidQ	AskQ	Prc	LTO
1206	L	3		104	99
	R	5		24	98
1205		720		33	97
	X	10		115	96
	0			32	95
	10 1H			27	94
	50 3H			63	93
S 0 W 24	1K 5H			45	92
S 0 W 7	CLR			28	91
	X 10			20	90 10
	17				
B 0 W 15	CXL	18		89	
B 0 W 13	+ -	97		88	
	NET 0	30		87	
B 0 W 17	NET REAL	43		86	
		110		85	
		23		84	
		31		83	
		125		82	
		21		81	

1206 1201 1202 1203 1207

The inventors' purposeful and distinctly different uses of horizontal and vertical curly brackets strongly suggests to the PHOSITA that the inventors contemplated the price column as comprising all (not just some) prices displayed in the graphical user interface. If the inventors were truly in possession of a price column comprising less than all of the prices displayed in the graphical user interface, then the inventors would have used a vertical curly bracket—as it did to illustrate the inside market and entered and working order—to illustrate an example of the Static Limitation where only some of the prices displayed were static.

(Voller Decl., Ex. E at ¶¶ 42-45.)

RESPONSE: TT admits that Paragraph 57 quotes portions of the March 16, 2014

Declaration of Dr. Mellor.

58. The March 17, 2014 Declaration of Dr. Mellor states that:

During the prosecution of the '132 patent, the patent examiner rejected all claims because the claim limitation "static display" was "indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention." (Ex. 6 at p. 39, '132 patent Prosecution History, June 8, 2001 Office Action (CQG014197902).) . . . The examiner invited the applicant to clarify "to what extent," to what degree," and "on what basis" the display changes. A marked up copy of the rejection with emphasis added is reprinted below.

* * *

Claim Rejections - 35 USC § 112

5. Claims 22-40 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. The claim limitations "dynamic display" and "static display" are vague and indefinite. The applicant is requested to claim "to what extent", "to what degree", and "on what basis" the displays "change".

B. The *scope* of a "single action" (i.e. claim 23) is unclear.

C. The limitation "based in part" (i.e. claim 23) is vague indefinite and not defined.

D. The claim limitation "current net position" (i.e. claim 25) is not defined.

On October 9, 2001, the inventors filed a response to the rejection. The inventors explained that the invention is drawn to a price column where "the values in the price column remain 'static'; that is, they do not change positions in the display (unless a re-centering command is received)." (Ex. 6 at p. 27, '132 patent Prosecution History, October 9, 2001 Response to Office Action (CQG014197864).) The inventor then explained that Figures 3 and 4 are demonstrative of the lack of movement of all values in the price column over a period of time and that "it can be seen that the price column remained static, but the corresponding bids and asks rose up the price column when the quantities updated." *Id.* In other words, the inventors made clear that the invention was drawn

to a price column where all prices or values in the price column were static. A marked up copy of the substance of the response is depicted below with emphasis added.

* * *

Claims 22-40 stand rejected under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding the claim limitations "dynamic display" and "static display", the Applicant respectfully directs the Examiner's attention to pages 13-15 of the specification describing the static nature of the price values and the dynamic nature of the one or more bids and/or asks displayed. In summary, the values in the price column remain "static"; that is, they do not change positions in the display (unless a re-centering command is received). In contrast, the one or more values in the Bid and Ask columns are "dynamic"; that is, they move along an axis (up and down, for example) and are aligned with the corresponding price values to reflect the market depth for a given commodity. For an example, the Examiner is directed to Figures 3 and 4 of the specification. Figure 4 shows a display of the same market as that of Figure 3, but at a later time interval. Upon comparison of these figures, it can be seen that the price column remained static, but the corresponding bids and asks rose up the price column when the quantities updated.

(Voller Decl., Ex. E at ¶¶ 60-61.)

RESPONSE: TT admits that Paragraph 58 quotes portions of the March 16, 2014

Declaration of Dr. Mellor.

59. The March 17, 2014 Declaration of Dr. Mellor states that:

On July 31, 2002 and in response to the inventors' response, the examiner issued a notice of allowance along with a statement of

reasons for allowance. (Ex. 6 at pp. 7-13, (CQG014197838.)) The statement of reasons for allowance indicates, among other things, that the prior art does not teach a static display, directed to a commodity price, that does not change. (*Id.* at p. 12, '132 patent Prosecution History, July 31, 2002 Notice of Allowability. (CQG014197839.)) A copy of the examiner's statement of reasons for allowance is set forth below with emphasis added in yellow.

* * *

2. The following is an examiner's statement of reasons for allowance:

The prior art fails to teach a method of placing a trade order, computer readable medium with instructions for placing a trade order, and/or a client system for placing a trade order comprising a dynamic display and a static display. The static display, directed to the commodity price, does not change. In contrast, the values of the bid/ask, reflecting the market depth for the commodity, are dynamically displayed and are aligned with the corresponding static price values. These features in combination with the claim features of claims 22, 29 and/or 35 render the claims allowable.

(Voller Decl., Ex. D at ¶ 62.)

RESPONSE: TT admits that Paragraph 59 quotes portions of the March 16, 2014

Declaration of Dr. Mellor.

60. The March 17, 2014 Declaration of Dr. Mellor states that:

I understand that allowability was withdrawn because the inventors filed a statement requesting that the examiner review various prior art references. Ultimately, the inventors amended the claims to provide for: (a) setting a preset parameter of the trade order; (b) clarification that the static display of prices does not move in response to a change in the inside market; (c) displaying an order entry region; and (e) selecting a particular area in the order entry

region to set additional parameters and send the trade order to the electronic exchange. (Ex. 6 at p. 14, (CQG014197772).) The amendment was accompanied by remarks suggesting that the examiner in a telephone conference had agreed that the amended claims were allowable. (*Id.* at p. 13, '132 patent Prosecution History, March 21, 2003 Supplemental Amendment (CQG014197771).)

In response to the amendment, the examiner issued a second notice of allowability and statement of reasons for allowance. (*Id.* at pp. 1-6, (CQG014197724).) That statement of allowability indicates that the “unlike the prior art, the ‘static’ display of prices is just that, static, and does not move in response to a change in the inside market.” (*Id.* at p. 5, '132 patent Prosecution History, February 10, 2004 Notice of Allowability (CQG014197725).)

A review of the '132 Prosecution History demonstrates that the inventors overcame the examiner's rejection, the prior art, and complied with the patent law regarding definiteness by explaining that the values (*i.e.*, all values) in the price column remain static and do not change unless a re-centering command is received as illustrated in Figures 3 and 4 of the patents. The examiner accepted this explanation and ultimately issued the patent. I therefore conclude that a PHOSITA would understand that the inventors did not possess anything other than the explanation they provided to the examiner. In other words, the inventors were only in possession of a price column where *all* values or prices displayed in the column are static.

(Voller Decl., Ex. D at ¶¶ 63-65.)

RESPONSE: TT admits that Paragraph 60 quotes a portion of the March 16, 2014

Declaration of Dr. Mellor.

61. The March 17, 2014 Declaration of Dr. Mellor states that:

The prosecution history for the '304 patent is short when compared to prosecution history for the '132 patent. I understand that the inventors filed a single amendment cancelling the original claims and adding new claims. These claims ultimately became the claims in the '304 patent. The accompanying remarks suggest that the examiner and inventors had a telephone conversation where the examiner agreed that the new claims were allowable. (Ex. 4 at p. 8, '304 patent Prosecution History, September 26, 2002

Amendment (CQG140190273-74).)

In response the examiner issued a notice of allowability and stated the reasons for allowance on February 10, 2004. The statement of reasons for allowance are nearly identical to the statement of reasons for allowance associated with the second notice of allowability in the '132 patent Prosecution History. Importantly, the examiner used the same language and referred to the invention using the term “static display.” The examiner indicated that “unlike the prior art, the ‘static’ display of prices . . . does not move.” '132 patent Prosecution History, February 10, 2004 Notice of Allowability (CQG014190292).

I understand the examiner’s statement on reasons for allowance to mean that the examiner did not differentiate between the “static display of prices” of the '132 patent and the “common static price axis” of the '304 patent. Accordingly, for the same reasons as I identified above, I conclude that the inventors were only in possession of a graphical user interface with a price column where all prices displayed in the price column are static.

(Voller Decl., Ex. D at NN 66-68.)

RESPONSE: TT admits that Paragraph 61 quotes a portion of the March 16, 2014

Declaration of Dr. Mellor.

62. The March 17, 2014 Declaration of Dr. Mellor states that:

During the *eSpeed* Case, TT and Mr. Brumfield admitted that Mr. Brumfield did not have *any* experience programming or designing any type of GUI. (Ex. 18. at pp. 58-59, Ex. 17 at p. 100.) Instead, Mr. Brumfield had experience as a trader and electronic trader. (Ex. 17 at p. 99) This alone was enough for him to conceive of nearly all of the ideas described in the invention. (*Id.*; Ex. 18 at p. 155.)

According to Mr. Brumfield’s testimony, he was incapable of building the software himself because his “banking and finance degree wasn’t going to help [him] much on that.” (Ex. 18 at pp. 58-59.) Because he was not a software engineer, he turned to people at TT—who were allegedly skilled in creating software and software code. (*Id.*; Ex. 17 at pp. 100-101.) The “partnership between TT, the software code experts, and Mr. Brumfield, the

expert trader who knew what traders wanted, and specifically what he wanted from software, resulted in this invention.” (Ex. 17. at pp. 100-101.)

Because I understand that the PHOSITA must be someone capable of *making* and using the invention, here a GUI, it is clear that Mr. Brumfield, a person with a non-technical bachelor’s degree and without programming experience, is not the PHOSITA. In fact, his testimony that his non-technical degree was not going to help him make the invention, confirms that programming experience is a prerequisite to the correct PHOSITA definition. Further, even if Messrs. Kemp and Schluetter, the other inventors, both had years of experience programming GUIs for electronic trading, this experience is not the level of ordinary skill in the art. Instead, this experience would constitute a level of *extraordinary* skill in the art. And, as an expert on GUIs, my experience (detailed below) confirms that one need *not* have trading experience or experience programming GUIs for electronic trading to offer testimony on the perspective of ordinary skill in the art for this case.

(Voller Decl., Ex. D at NN 72-74.)

RESPONSE: TT admits that Paragraph 62 quotes a portion of the March 16, 2014

Declaration of Dr. Mellor.

63. The March 17, 2014 Declaration of Dr. Mellor states that:

Based on this experience the PHOSITA here is a person with a technical degree or equivalent experience (as described above) and two years of experience programming GUIs together with a general knowledge of trading and electronic trading. The PHOSITA is not someone with several years’ experience programming GUIs for electronic trading. My belief is confirmed by real world experience. For instance, I do not know how to fly a helicopter, yet I have programmed GUIs for helicopters. And, in many instances over the past two decades, I did not have experience programming GUIs for use in a given field prior to actually programming GUIs for that field the first time. What is required to be a person of ordinary skill for nearly every GUI is a basic knowledge of the problem to be solved, and the improvement to be made or the goals to be achieved through the use of the GUI. In other words, in order to be a person of ordinary skill in the art in programming GUIs, it is necessary to have a general appreciation

for what it is that is being built, the environment in which it works, and why. So, a person with no appreciation for trading and electronic trading is *not* a person of ordinary skill in the art.

My definition further comports with the realities of programming GUIs. For instance, it is common for programmers to first learn the fundamentals of the real world environment in which the GUI will operate while programming it. For example, in programming GUIs for helicopters, a programmer might “get up to speed” on the basics of the environment where the GUI will work, how and why pilots will use the GUIs, *etc.* as part of building the GUI. The same is true here. A PHOSITA here would be someone with GUI experience that “gets up to speed” on what needs to be accomplished and why.

Further supporting my opinion is the fact that eight *undergraduate* students at Rose-Hulman Institute of Technology were sponsored by the Chicago Mercantile Exchange (“CME”) a few years ago to design and build GUIs for its customers as part of their senior design projects. Although one of my colleagues was responsible for mentoring these students, I have personal knowledge of the projects as an active and tenured member of the faculty at Rose-Hulman. I attended several student presentations regarding the projects, including the expo where the final results and a demonstration of the GUIs were presented. I personally used the GUIs developed/programmed by these students. I also taught several of the students the skills they needed to accomplish these projects in prior courses (*e.g.*, computer graphics courses).

In the 2009 project, the *undergraduate* students built (*i.e.*, programmed) a web-based user portal that provided users with real-time quotes and pricing information. The user portal allowed CME users to track and research their portfolio performance and a number of different modules on their screen, and chart historical time-series data on various instruments. In the 2008 project, the *undergraduate* students built (*i.e.*, programmed) a web-based and desktop widget that dynamically updated itself to display the current value of commodity contracts being bought and sold on the CME. The widget was displayed in an Internet browser initially and was capable of being dynamically moved from the browser to the user’s desktop. The widget was implemented in the Java programming language and used a network connection to update itself over time. The students in both projects successfully built the portal and widget using trading information disclosed to them from the CME.

These eight undergraduate students had *less* than the level or ordinary skill in the art as proposed by TT, yet without any past experience programming GUIs for electronic trading they programmed these GUIs. Based on my knowledge of the student projects, the work they accomplished, and my understanding of the GUI described in the asserted patents, the GUIs programmed by these students were comparable in complexity to the GUI described in the asserted patents.

Thus, the first [PHOSITA] factor suggests that the PHOSITA is a person with a particular type of formal training or equivalent experience. A degree in liberal arts/business/finance and experience trading is not sufficient as Mr. Brumfield testified. Instead, a PHOSITA must be a person with a bachelor's degree in computer science, computer engineering, or electrical engineering, or equivalent experience. Second, the PHOSITA need not have experience programming GUIs for electronic trading. Instead, the PHOSITA is a person with two years' experience programming GUIs with general knowledge of trading and electronic trading.

(Voller Decl., Ex. D at ¶¶ 76-81.)

RESPONSE: TT admits that Paragraph 63 quotes portions of the March 16, 2014

Declaration of Dr. Mellor.

64. On June 29, 2013, CQG served its Interrogatory No. 25 upon TT. (Voller Decl., Ex. F.)

Interrogatory No. 25 asked TT to, among other things,

Further state where there is written description support in the specification of the '132 Patent (by pinpoint citation) for TT's contention that the term "display of prices" can be read on any element of any accused instrumentality other than all price levels and/or prices displayed or capable of being displayed within that accused instrumentality (*e.g.*, all price levels and/or prices capable of being displayed in CQG's Accused DOMTrader Windows including those price levels and prices displayed or capable of being displayed in the Top Market Pane Zone and/or the Bottom Market Pane Zone).

(Voller Decl., Ex. F at 10.)

RESPONSE: TT admits that Paragraph 53 quotes a portion of CQG's Interrogatory No.

25 served upon TT on June 29, 2013.

65. Interrogatory No. 25 also asked TT to:

Further state where there is written description support in the specification of the '304 Patent (by pinpoint citation) for TT's contention that the term "common display of prices" can be read on any element of any accused instrumentality other than all price levels and/or prices displayed or capable of being displayed within that accused instrumentality (e.g., all price levels and/or prices capable of being displayed in CQG's Accused DOMTrader Windows including those price levels and prices displayed or capable of being displayed in the Top Market Pane Zone and/or the Bottom Market Pane Zone).

(Voller Decl., Ex. F. at 10-11.)

RESPONSE: TT admits that Paragraph 65 quotes another portion of Interrogatory 25.

66. On September 4, 2013, TT served its Amended Response to Interrogatory No. 25. (Voller Decl., Ex. G.) TT's Amended Response states:

With respect to CQG's request that TT identify the written description support for various terms, TT objects to this request as calling for a legal contention. However, TT notes that the specifications of the patents-in-suit only need to provide written description support for the 'static display of prices' and 'common static price axis' terms found in the claims. *See* TT's Response to CQG's Final Invalidity Contentions at p. 76-77. These terms, which were construed in the *eSpeed* case, find ample support in the specifications of both patents. Examples of such support are identified below:

- Provisional patent No. 60/186,322 figures at p. 24, 28, 29, 31, 32.
- 'Mercury displays a static vertical column of prices . . .'
- Provisional patent No. 60/186,322 at p. 23-24.
- 'Prc Column: This column represents prices for the chosen commodity.' Provisional patent No. 60/186,322 at p. 28.
- 'The price column remained static, but the corresponding bids

and asks rose up the price column.’ Provisional patent No. 60/186,322 at p. 30.

- FIGS. 3-5 of the '132 and '304 patents.
- ‘In the preferred embodiment of the invention, the Mercury display is a static vertical column of prices . . .’ '132 patent at 7:29-31; '304 patent at 7:48-50.
- ‘The values in the price column are static . . .’ '132 patent at 7:46; '304 patent at 7:65.
- ‘In comparing FIGS. 3 and 4, it can be seen that the price column remained static, but the corresponding bids and asks rose up the price column.’ '132 patent at 8:44-47; '304 patent at 9:9-12
- ‘As the market ascends or descends the price column, the inside market might go above or below the price column displayed on a trader's screen.’ Provisional patent No. 60/186,322 at p. 35; '132 patent at 8:49-51; '304 patent at 9:14-16.

TT also notes that, under controlling law, there is no requirement that the written description support unclaimed features or functionality, such as displaying price levels in addition to a range of price levels that comprise a static price axis.”

(Voller Decl., Ex. G at 8-9.)

RESPONSE: TT admits that Paragraph 66 quotes a portion of TT’s September 4, 2013 Amended Response to Interrogatory No. 25.

**TT'S STATEMENT OF UNDISPUTED MATERIAL FACTS IN SUPPORT OF ITS
CROSS-MOTION FOR PARTIAL SUMMARY JUDGMENT THAT THE "STATIC"
LIMITATIONS MEET THE WRITTEN DESCRIPTION REQUIREMENT**

Pursuant to Local Rule 56.1, Plaintiff Trading Technologies International, Inc. ("TT") submits this Statement of Undisputed Material Facts ("SOF") in support of its Cross-Motion For Partial Summary Judgment that the "Static" Limitations Meet the Written Description Requirement.

Description of the Parties

1. Trading Technologies International, Inc. ("TT") is a Delaware corporation with its principal place of business at 222 South Riverside Plaza, Chicago, Illinois.

2. Defendant CQG, Inc. ("CQG") is a Colorado Corporation with its principal place of business at 1050 17th Street, Suite 2000, Denver, CO 80265. (Answer to First Amended Complaint, Dkt. No. 332 ¶ 2.)

3. Defendant CQGT, LLC ("CQGT") is a Colorado Limited Liability Company with its principal place of business at 1050 17th Street, Suite 2000, Denver, CO 80265. (Answer to First Amended Complaint, Dkt. #332 ¶ 3.) CQGT was formed by CQG on August 15, 2005 and is a wholly-owned subsidiary of CQG, Inc. (Answer to First Amended Complaint, Dkt. No. 332 ¶ 4.)

Jurisdiction and Venue

4. This is an action under the patent laws of the United States, 35 U.S.C. §§ 1 et seq., wherein TT alleges that CQG and CQGT infringed and continue to infringe the U.S. Patent Nos. 6,772,132 ("the '132 patent") and 6,766,304 ("the '304 patent") (collectively, "the patents-in-suit").

5. This Court has subject matter jurisdiction pursuant to the laws of the United States governing actions related to patents and declaratory judgments, 28 U.S.C. §§ 1331 and 1338(a).

6. TT alleges specific acts of infringement by CQG and CQGT occurring in this district, and thus alleges that this Court has specific jurisdiction over CQG and CQGT.

7. Venue in this judicial district is proper under 28 U.S.C. §§ 1391 and 1400.

The Patents-in-Suit

8. TT owns U.S. Patent Nos. 6,772,132 (“the ‘132 patent”) and 6,766,304 (“the ‘304 patent”) (collectively “the Patents-in-Suit”). (Voller Decl., Exs. A, B).

9. Each claim of the ‘132 patent recites a “‘static’ display of prices.” (Voller Decl., Ex. B). Each claim of the ‘304 patent recites a “common ‘static’ price axis.” (Voller Decl., Ex. A).

10. The patents-in-suit are both entitled “Click Based Trading with Intuitive Grid Display of Market Depth.” The patents-in-suit share a common written description with the exception of a statement in the ‘304 patent that indicates that it is a divisional application of Ser. No. 09/590,962. Voller Decl., Ex. A, ‘304 patent, 1:4-6. The patents-in-suit have different claims.

11. The ‘304 patent issued on July 20, 2004 and the ‘132 patent issued on August 3, 2004. The application that led to the ‘132 patent is Serial No. 09/590,962 (“the parent application”), and was filed on June 9, 2000. The application that led to the ‘304 patent was a divisional application from the parent application, and claims priority to the parent application. The parent application claims priority to a provisional application filed on March 2, 2000 (60/186,322) (Kurcz Decl., Ex. I at Ex. 4). The patents-in-suit both claim priority to the provisional application.

12. The '304 patent includes two independent claims, claim 1 and claim 27. Claim 1 of the '304 patent states as follows:

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

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

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

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

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

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

(Voller Decl., Ex.A, at 12:35-13:3).

13. Claim 27 of the '304 patent states as follows:

27. A computer readable medium having program code recorded thereon for execution on a computer for displaying market information relating to and facilitating trading of a commodity being traded in an electronic exchange having an inside market with a highest bid price and a lowest ask price on a graphical user interface, the program code causing a machine to perform the following method steps:

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

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

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

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

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

(Voller Decl., Ex. A at 14:47-15-17).

14. The '132 patent includes three independent claims, claim 1, claim 8, and claim 14.

Claim 1 of the '132 patent states as follows:

1. A method of placing a trade order for a commodity on an electronic exchange having an inside market with a highest bid price and a lowest ask price, using a graphical user interface and a user input device, said method comprising:

setting a preset parameter for the trade order

displaying market depth of the commodity, through a dynamic display of a plurality of bids and a plurality of asks in the market for the commodity, including at least a portion of the bid and ask quantities of the commodity, the dynamic display being aligned with a static display of prices corresponding thereto, wherein the static display of prices does not move in response to a change in the inside market;

displaying an order entry region aligned with the static display prices comprising a plurality of areas for receiving commands from the user input devices to send trade orders, each area corresponding to a price of the static display of prices; and

selecting a particular area in the order entry region through single action of the user input device with a pointer of the user input device positioned over the particular area to set a plurality of additional parameters for the trade order and send the trade order to the electronic exchange.

(Voller Decl., Ex. B at 12:2-27).

15. Claim 8 of the '132 patent states as follows:

8. A computer readable medium having program code recorded thereon, for execution on a computer having a graphical user interface and a user input device, to place a trade order for a commodity on an electronic exchange having an inside market with a highest bid price and a lowest ask price, comprising:

- a first program code for setting a preset parameter for the trade order;
- a second program code displaying market depth of a commodity, through a dynamic display of a plurality of bids and a plurality of asks in the market for the commodity, including the bid and ask quantities of the commodity, aligned with a static display of prices corresponding thereto, wherein the static display of prices does not move in response to a change in the inside market;
- a third program code for displaying an order entry region comprising a plurality of areas for receiving commands from the user input device to send trade orders, aligned with the static display of prices, each area corresponding to a price of the static display of prices; and
- a fourth program code for receiving a command as a result of a selection of a particular area in the order entry region by a single action of the user input device with a pointer of the user input device positioned over the particular area, to set a plurality of additional parameters for the trade order and send the trade order to the electronic exchange.

(Voller Decl., Ex. B at 12:57-13:17).

16. Claim 14 of the '132 patent states as follows:

14. A client system for placing a trade order for a commodity on an electronic exchange having an inside market with a highest bid price and a lowest ask price, the system comprising:

- a parameter setting component for setting a preset parameter for the trade order;
- a display device for displaying market depth of a commodity, through a dynamic display of a plurality of bids and a plurality of asks in the market for the commodity, including the bid and ask quantities of the commodity, aligned with a static display of prices corresponding thereto, wherein the static display of prices does not move when the inside market changes, and for displaying an order entry region aligned with the static display of prices, comprising a plurality of areas for receiving commands to send trade orders, each area corresponding to a price of the static display of prices;
- a user input device for positioning a pointer thereof over an area in the order entry region; and
- a trade order sending component for receiving a command as a result of a selection of the area in the order entry region by a single action of the user input device with a pointer of the user input device positioned over the area, to set a plurality of additional parameters for the trade order and send the trade order to the electronic exchange.

(Voller Decl., Ex. B at 13:55-14:14).

17. The claims of the '132 patent do not recite non-static price levels. Voller Decl., Ex. B at col. 12-16; Kurcz Decl., Ex. I at ¶ 45.

18. The claims of the '304 patent do not recite non-static price levels. Voller Decl., Ex. A at col. 12-16; Kurcz Decl., Ex. I at ¶ 45

The Court's Construction of "Static"

19. In the *Markman* opinion, Judge Moran construed the term "common static price axis" as set forth in the claims of the '304 patent as "a line comprising price levels that do not change positions unless a manual re-centering command is received and where the line of prices

corresponding to at least one bid value and one ask value.” Dkt. 105 at p. 6; Kurcz Decl., Ex. I at ¶ 30.

20. In the *Markman* opinion, Judge Moran construed the term “static display of prices” as set forth in the claims of the ‘132 patent as “a display of prices comprising price levels that do not change positions unless a manual re-centering command is received .” Dkt. 105 at p. 6; Kurcz Decl., Ex. I at ¶ 32.

21. In a supplemental *Markman* opinion, that Judge Moran clarified that a “static display of prices”/“common static price axis” could move in response to any type of manual movement or repositioning. In particular, he stated that “[o]ur earlier constructions remain, and we clarify that the price axis never changes positions unless by manual re-centering or re-positioning.” In other words, the construction permits movement of the price levels manually, such as by scrolling or re-centering. Dkt. 120, at 8; Kurcz Decl., Ex. I at ¶ 33.

22. Judge Moran construed the term “common” as “in relationship with.” Dkt. 105 at p. 9. Judge Moran also recognized “[t]hat market depth, which includes the best bid and best ask, can be displayed on an angle gives further support to plaintiff’s contentions that “common” connotes no more than a relationship between the price axis and the bid and ask display regions.” *Id.* Judge Moran later further defined “common” as “visually or graphically in relationship with” as set forth in the jury instructions of the *TT v. eSpeed* trial. Kurcz Decl., Ex. I at ¶ 31.

23. The Federal Circuit affirmed Judge Moran’s claim constructions. *TT v. eSpeed* 595 F.3d 1340, 1353 (Fed. Cir. 2010) (affirming Judge Moran’s *Markman* opinion regarding the “static” terms and further noting that the district court held that ‘the price axis never changes positions unless by manual re-centering or repositioning.’”). Kurcz Decl., Ex. I at ¶ 34.

24. This Court has denied Defendants' request for further *Markman* proceedings pertaining to the patents-in-suit. Dkt. 735. Judge Moran's construction of the "static" terms governs Defendants' and TT's present motions. *Id.* at p. 8; Kurcz Decl., Ex. I at ¶ 35.

25. The claims were not construed as requiring and do not recite a price axis or display of prices that includes a zone or a range of static price levels and additional ranges or zones of non-static price levels. In other words, the claims were not construed as requiring and do not recite a price axis or display of prices where all displayed price levels are static. Voller Decl., Ex. A at col. 12-16; *Id.*, Ex. B at col. 12-16; Kurcz Decl., Ex. I at ¶ 27, 28, 30, 32.

Person of Ordinary Skill in the Art

26. The May 16, 2014 Declaration of Dr. Pirrong states that:

one of ordinary skill in the art for purposes of this case is a person having (1) a bachelor's degree or equivalent experience and (2) two years of experience designing and/or programming graphical user interfaces, including experience designing and/or programming graphical user interfaces for electronic trading based on input from a person with knowledge of the needs of an electronic trader.

Kurcz Decl., Ex. I at ¶ 21.

The Provisional Application’s Support for the “Static” Terms

27. The provisional application (“provisional”) states:

In turn, Mercury further increases the speed of trading and the likelihood of entering orders at desired prices with desired quantities. Mercury displays a *static vertical column of prices* with the bids and asks displayed in vertical columns to the side of the price column. An example of this display follows:

The screenshot shows a trading window with the following data:

EW	10:48:44	BidQ	AskQ	PrC	LTO
	L 3		104	99	
	R 6		24	99	
	720		33	97	
	X 10		116	96	
	0		32	96	
	10 1H		27	94	
	50 3H		63	93	
S 0 W 24	1K 6H		45	92	
S 0 W 7	CLR		28	91	
	X 10		20	90	10
	17		18	89	
H 0 W 16	CXL		97	88	
H 0 W 13	+ -		30	87	
	NET 0		43	86	
H 0 W 17	NET REAL		110	85	
			23	84	
			31	83	
			125	82	
			21	81	

Kurcz Decl., Ex. I at ¶ 37.

28. After describing the display of prices as “static”, the provisional juxtaposes the figure above with one in which the market has moved up three ticks, i.e. from a best bid price of 89/best ask price of 90 to a market in which the best bid price is 92 and the best ask price is 93. In particular, the provisional application states:

The inside market and market depth ascend and descend as prices in the market increase and decrease. For example, the following screen depicts the same market at a later interval where the inside market has risen three ticks:

EW	10:48:44	BidQ	AskQ	Pr:	LTO
	L 3		104	99	
	R 5		24	98	
	720		33	97	
	X 10		115	96	
	0		32	96	
	10 1H		27	94	
	60 3H		63	93	10
S 10	1K 6H				
W 14	GLR	43		92	
	X 10	125		91	
	17	97		90	
	CXL	18		89	
B 0					
W 16					
B 0					
W 13	NET 0	30		87	
B 0					
W 17	NET REAL	43		86	
		110		86	
		23		84	
		31		83	
		125		82	
		21		81	

Kurcz Decl., Ex. I at ¶ 38.

29. The provisional then states:

Now the inside market is at Price: 93 with the Ask Q: 63 and the BidQ: 43. The *price column remained static*, but the corresponding bids and asks rose up the price column. Market Depth similarly ascends and descends the price column, leaving a vertical history of the market.

Kurcz Decl., Ex. I at ¶ 39.

30. The provisional also states “the market ascends or descends the price column...”

Kurcz Decl., Ex. I at ¶ 40. The provisional also discloses a one click re-centering feature. Kurcz Decl., Ex. D, p. 35.

31. The provisional alone fully supports that the inventors were in possession of a “static display of prices” and “common static price axis” as construed by Judge Moran at the time of the filing of the provisional application. Kurcz Decl., Ex. I at ¶ 41.

32. In Dr. Pirrong’s May 16, 2014 Declaration, he states:

Thus, the provisional alone fully supports that the inventor possessed the “static” terms as construed at the time of the filing of the provisional application. Both the text and drawings expressly disclose that the inventors had invented “a display [line] of prices comprising price levels that do not change positions unless a manual re-centering command is received [and where the line of prices corresponding to at least one bid value and one ask value].”

In summary, the provisional expressly discloses the claimed “static” limitations in both text and figures. Because the provisional’s disclosure is explicit and consistent throughout, my analysis does not change regardless of the level or ordinary skill in the art.

The text and drawings from the specification of the patents-in-suit make the same disclosure as the provisional application, and similarly support the “static” limitations.

Kurcz Decl., Ex. I at ¶ 41-43.

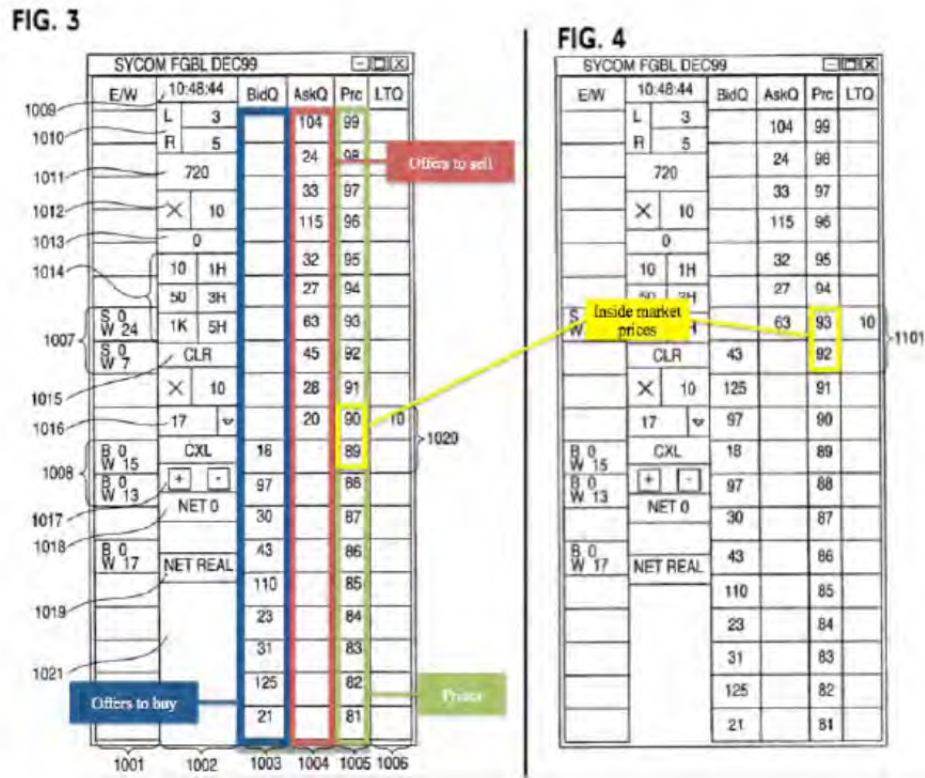
The Specification’s Support for the “Static” Terms

33. The specification of the patents-in-suit state that:

Specifically, the present invention is directed to a graphical user interface for displaying the market depth of a commodity traded in a market, including a dynamic display for a plurality of bids and for a plurality of asks in the market for the commodity and a *static display of prices* corresponding to the plurality of bids and asks.

Voller Decl., Ex. A at 3:15-20 (emphasis added); *Id.*, Ex. B, at 3:11-16 (emphasis added).

34. Figures 3 and 4 of the patents-in-suit are similar to the figures referenced above from the provisional. Figures 3 and 4 of the patents-in-suit have been reproduced below with additional highlighting:



Voller Decl., Ex. A Figs. 3-4; *Id.*, Ex. B, at Figs. 3-4; Kurcz Decl., Ex. I at ¶ 43.

35. The specification of the patents-in-suit state that “in comparing FIGS. 3 and 4, it can be seen that the price column remained static, but the corresponding bids and asks rose up the price column.” Voller Decl., Ex. A at 9:9-12; *Id.*, Ex. B at 8:44-47; Kurcz Decl., Ex. I at ¶ 43.

36. The specification of the patents-in-suit state “In the preferred embodiment of the invention, the Mercury display is a static vertical column of prices . . .” Voller Decl., Ex. A at 7:48-50; *Id.*, Ex. B at 7:29-31; Kurcz Decl., Ex. I at ¶ 43. Further they state that “The values in the price column are static, that is, they do not normally change positions unless a re-centering command is received . . .” Voller Decl., Ex. A at 7:65; *Id.*, Ex. B at 7:46; Kurcz Decl., Ex. I at ¶ 43.

37. The specification of the patents-in-suit also states that “the market ascends or descends the column...” Voller Decl., Ex. A at 9:15-23; *Id.*, Ex. B at 8:49-57.

Neither the Written Description Nor File Histories Identify Any Relevant Limiting Language

38. The provisional, specifications, and file histories do not identify any feature pertaining to “static” as essential or required that is missing from the claims of the patents-in-suit. Kurcz Decl., Ex. I at ¶ 45.

39. Non-static price levels are not required by the claims and are not described in the patents-in-suit. *Id.*

40. There is no clear and unambiguous disclaimer in the provisional, specifications, or file histories that precludes a “common static price axis/static display of prices” from being used with an additional range or zone of non-static price levels: i.e. that requires all displayed price levels to be static. Kurcz Decl., Ex. I at ¶ 46.

41. Moreover, there is no statement in the provisional, specifications, or file histories distinguishing any prior art reference based on such prior art having some but not all prices static, i.e., not having all displayed prices static. Kurcz Decl., Ex. I at ¶ 47.

**TT'S STATEMENT OF ADDITIONAL UNDISPUTED MATERIAL FACTS IN
RESPONSE TO CQG'S MOTION FOR SUMMARY JUDGEMNT
THAT THE '304 AND '132 PATENTS ARE INVALID UNDER 35 U.S.C. §112, ¶ 1
FOR LACK OF WRITTEN DESCRIPTION**

**With Respect to the "Static" Terms, The Claims Do Not Omit a Necessary or Essential
Feature And The Written Description Does Not Include Any Disclaimer or Disavowal That
Would Preclude "Static" Price Levels From Being Used With Non-static Price Levels**

42. Judge Moran's claim construction opinions did not identify any disavowal of the construed scope of the "common static price axis/static display of prices" claim terms that would prohibit use with non-static price zones. Further, none of the Defendants involved in the *Markman* proceedings, including CQG, argued for such a disavowal. Case No. 04-cv-5312, Dkt. Nos. 105, 120, 230, 304-306, 309, 322, 326, 330, 343-345, 361, 362, 381, 384, 401, 405, 407, 410, 411, 413, 416, 425, 426, 446, 447, 450, 475, 710, 747, 875; Case No. 05-cv-4088, Dkt. No. 127.

43. CQG's expert, Dr. Mellor's April 25, 2014, transcript states:

Q. ...And so my question is did you observe, in reviewing the '304 patent, that the price column has static price levels?

MR. VOLLER: Form.

BY MR. SAMPSON:

Q. In respect to figures three, four, five. I'm not talking about anything else in the patent.

A. So in comparing figures three and four, it shows that the price column in figure three is unchanged in figure four.

Q...Is there written description support in the '304 patent and the '132 patent for a display having price levels in which all the price levels are static?

MR. VOLLER: Form.

THE WITNESS: So that conclusion is -- is written down in -- in my declaration.

BY MR. SAMPSON:

Q. Okay. And where are you referring just so that we're on the same page?

A. Paragraph 108. And it very clearly says that the inventors were only in possession of a graphical user interface with a price column where all prices displayed in the column are static.

BY MR. SAMPSON: Q. Okay. Do you -- you agree that the patent shows a price column with static price, right?

MR. VOLLER: Form.

THE WITNESS: When we looked at figures I believe it was three and four, that shows a price column where all of the prices remain static between those two points.

Kurcz Decl., Ex. J at 127:11-21; 132:12-133:2, 151:3-11.

44. Dr. Mellor also testified that “there is not a quotation that says all price levels must be static.” Kurcz Decl., Ex. J at 126:20-22; *see also id.* at 148:11-24. Dr. Mellor’s April 25, 2014, transcript states:

Q. Okay. Let's start with if you could answer my question, which is, is there anything in the patent, either patent, Exhibit 2 or Exhibit -- Exhibit 3, that expressly says that all of the price levels have to be static?

A. There's nothing that says that in quotes like you just said. I think there's overwhelming evidence that that's exactly what the patent says.

Q. And I want to just go stepwise through this so that we can have a clear record. So there's not an explicit statement in the patent that says all of the price levels must be static; is that correct?

A. There's -- like I said, there's not a quotation that says all price levels must be static.

Q. Okay. Yep, I saw that. I think we established this already with respect to the whole patent. But the claims themselves don't say all the price levels are static, right?

MR. VOLLER: Form.

THE WITNESS: Again, as -- as I said, it doesn't --

BY MR. SAMPSON:

Q. It doesn't use those words?

A. It does not use those words, no.

A. What I said was that there was not written description support for anything other

than that. And, in fact, the evidence indicates that the inventors were only in possession of a price column where all of the prices were static.

Q. Okay.

A. I did not say that the patent said, quote, all prices must be static.

Kurcz Decl., Ex. J at 134:23-134:7; 134:11-18; 136:4-12.

45. Dr. Mellor testified that the patents-in-suit do not state that static prices and non-static prices or zones cannot be used together but “there is no written description support for doing that” and that “[b]ecause those words aren’t there doesn’t imply that there’s written description for anything one way or another.” Kurcz Decl., Ex. J at 154:7-155:4; 157:7-22. Dr. Mellor’s April 25, 2014, transcript states::

Q. If the law -- I'm going to give you a hypothetical. Okay?

JOHN PHILLIP MELLOR, Ph.D.

If the law requires a patent to expressly state that this invention cannot be used with another feature in order for that to be precluded under the written description analysis, if that was the law, would that change your opinion?

MR. VOLLER: Form. Incomplete hypothetical. Scope.

THE WITNESS: I'm not sure. Again, I'm not exactly sure. I'm not a lawyer. So I don't -- I don't know all the ins and outs of the law. But that's certainly very different from what I think I understand the law to be. And I haven't thought about that case.

Kurcz Decl., Ex. J at 157:24-158:15.

46. Dr. Mellor did not opine on whether the written description supports what is required by the claims. Kurcz Decl., Ex. J at 85:10-15; 100:13-24. Dr. Mellor’s April 25, 2014, transcript states:

Q...As part of your written description analysis, did you endeavor on your own to -- to try to set out what the claims require?

MR. VOLLER: Form. Scope.

THE WITNESS: Not as part of my written description analysis.

Q. So as part of your analysis, you did not determine what the claims require?

MR. VOLLER: Form. Scope. Asked and answered.

THE WITNESS: I -- I think I've -- I've answered that, that I said the written description analysis that I did looked at whether there was written description support for a price column where all prices are static or whether there was written description support for a price column where only some of the prices are static

If you turn to -- I'm looking now at the declaration in support of summary judgment, PDX 2362. Looking at paragraph five, we looked at this a little bit earlier.

But do you see in the middle of the paragraph -- well, the first sentence -- I'll just read the first sentence. It says "CQG attorneys also explained to me that the patent law requires the inventor to have demonstrated at the time of the filing date of the patent application that he was in actual possession of the invention as claimed or asserted against others."

Do you see that?

A. Yes, I see that.

Q. Okay. And -- and I want to focus on the -- the very last clause of the sentence, the "as claimed or asserted against others."

JOHN PHILLIP MELLOR, Ph.D.

What does that mean to you?

MR. VOLLER: Form. Scope.

THE WITNESS: So as I described in this same declaration later, when I summarized my understanding of the patent law, my

understanding is that the written description requirement exists to prevent a patent owner for -- from overreaching his invention. And so one mechanism of that overreach may be how that patent owner tries to assert that patent against others.

BY MR. SAMPSON:

Q. Okay. And that's what I was trying to figure out. So sometimes when you say A or B, those are two synonyms. Sometimes they're different -- substantive differences.

And so my question was: Is as claimed different than as asserted against others, or do they have the same meaning to you?

MR. VOLLER: Form. Scope.

THE WITNESS: Again, I'm -- I'm not a lawyer.

And I'm not sure I'm -- you know, I'm totally comfortable going through some of these nuances.

JOHN PHILLIP MELLOR, Ph.D.

BY MR. SAMPSON:

Q. But this is your report, right? These are your words?

A. They -- they are. And so that what's written there reflects what my understanding of, you know, the -- of that written description requirement.

Kurcz Decl., Ex. J at 85:10-15; 100:13-24.

47. Dr. Mellor's April 25, 2014, transcript states:

Q. Okay. Do you believe that the patents-in-suit are invalid for lack of written description?

MR. VOLLER: Form and scope.

THE WITNESS: I haven't been asked to consider that, nor have I done that.

Kurcz Decl., Ex. J at 86:13-18.

48. CQG's expert admitted that CQG's counsel instructed him to examine only whether there was written description support for a price column where some but not all prices are static— not to evaluate whether there was support for what the claims as construed recite. Kurcz Decl., Ex.

transcript states:

Q. Okay. So looking at the second sentence of the conclusion, is it your opinion -- it is your opinion, right, that there's no written description support for a JOHN PHILLIP MELLOR, Ph.D.

price level where some -- excuse me -- a price column where some, but not all, of the prices are static?

A. I think that's exactly what that sentence says.

Q. Okay.

A. The inventors were not in possession of a graphical user interface with a price column where only some, but not all, displayed price levels are static.

Q. Okay.

A. And that is my conclusion.

Q. And you are not opining that any claims are invalid, are you?

A. No. No. My task was to look at written description and -- and see if there's written description support for a price column with only some prices being static and look to see if there's written description support for a price column where all of the prices are static. And -- and that's -- those -- those opinions are summarized here in paragraph 108.

Q. Okay. And -- and that's the extent?

That's -- that's the extent of your opinion; is JOHN PHILLIP MELLOR, Ph.D. that correct?

MR. VOLLER: Form.

BY MR. SAMPSON:

Q. What you just said with respect to paragraph 108?

A. That's -- paragraph 108 is the extent of my opinion with regard to written description for a price column where all the prices are static or written description for a price column where only some of the prices are static.

Q. And just to be clear, your -- your conclusion is that price column where all the

prices are static, there is written description support, correct?

A. That is correct.

Q. Right?

A. What -- what I said is, instead, the inventors were only in possession of a graphical user interface with a price column where all prices displayed in the column are static.

Q. Okay. And -- but you -- your conclusion was there's no written description support for the other thing that you looked for, which was price column where some, but not all, JOHN PHILLIP MELLOR, Ph.D. of the prices are static?

A. That's correct. I found no written description support for that case where -- of a price column where -- that had only some of the prices being static.

Kurcz Decl., Ex. J at 250:22-253:6.

49. Dr. Mellor admitted that he did not take into account a presumption of validity of the patents-in-suit when analyzing written description. Kurcz Decl., Ex. J at 211:9-212:23. Dr. Mellor further admitted that he did not apply any burden of proof for proving failure of written description. Kurcz Decl., Ex. J at 212:25-213:18.

50. CQG's expert, Dr. Mellor, opined regarding whether there was written description support for what the claim covers. Kurcz Decl., Ex. J at 118:14-119:11. Dr. Mellor's April 25, 2014, transcript states: :

Q. And moving to the -- the next paragraph, paragraph 12, the second sentence says "During prosecution, the written description requirement prevents the patent applicant from presenting claims or amending claims that cover an invention different than the invention they actually possessed when the application was filed."

Do you see that?

A. I do.

Q. Okay. So I was just asking what your understanding was of "cover" in paragraph 12, JOHN PHILLIP MELLOR, Ph.D. and you said the invention that is claimed needs to be described in the specification. So I'm -- that's -- I'm just -- I'm trying to confirm that by cover you mean the claim -- the invention that you're claiming is described in the patent application.

MR. VOLLER: Form. Scope.

BY MR. SAMPSON:

Q. Is that what you're -- if I'm wrong, let me know.

A. I'm -- I'm not sure that that's exactly what I'm -- what I'm trying to convey there. So my -- my understanding, again, that's recited here in paragraph 12 is that the claims need to, I guess, I don't know, cover.

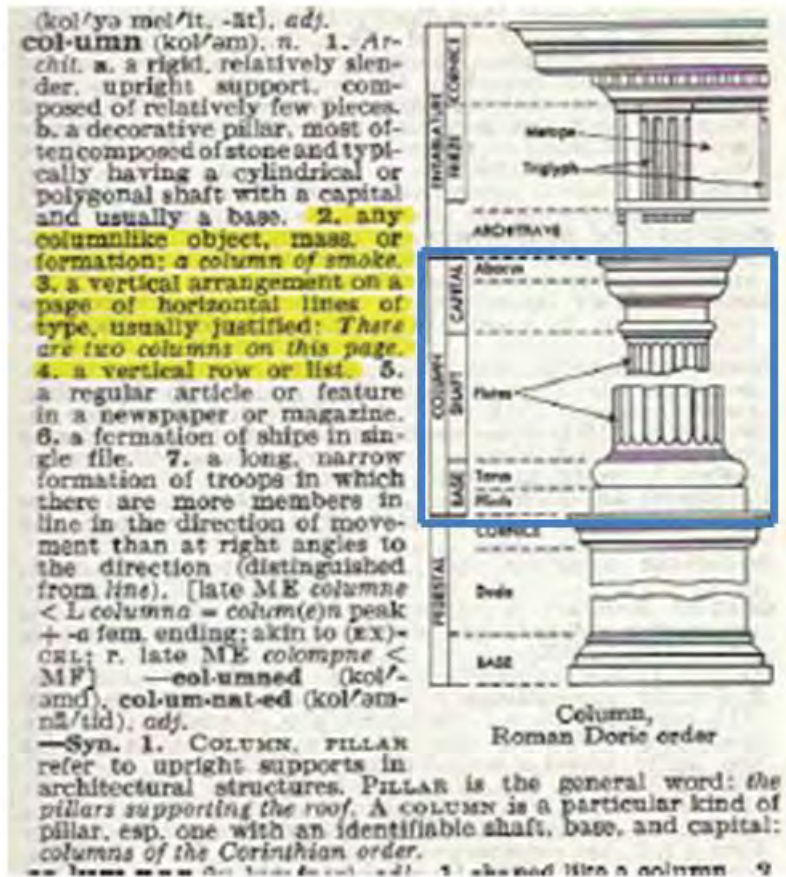
That -- and that's, you know -- gets more into that infringement thing that we were talking about earlier. You know, the range of inventions that are sort of covered by the claims needs to match up with the written description.

Kurcz Decl., Ex. J at 118:14-23; 119:24-120:22.

51. Dr. Mellor testified that his opinions in his Declaration “are the same opinions that are included in my expert report.” Kurcz Decl., Ex. J at 39:12-14.

52. Dr. Mellor provides the following definition of “column” from The Random House College Dictionary (1980):

(a) From The Random House College Dictionary (1980) (Ex. 13):



Voller Decl., Ex. D, at ¶ 41. The figure (highlighted in blue) shows a column which has within it multiple segments, each with a different appearance. Kurcz Decl., Ex. I at ¶ 49.

53. The use of curly brackets in figures is a common practice in patents as a method of identifying and pointing to features being discussed in the specification. Kurcz Decl., Ex. I at ¶ 50. No statement in the provisional, specification, or file wrappers states that all price levels identified by curly brackets must be static. Kurcz Decl., Ex. I at ¶ 50.

54. Dr. Mellor provides the following definition of “column” from The Random House College Dictionary (1980), which lists as the first definition ““belonging equally to or shared alike by two or more or all in question.”

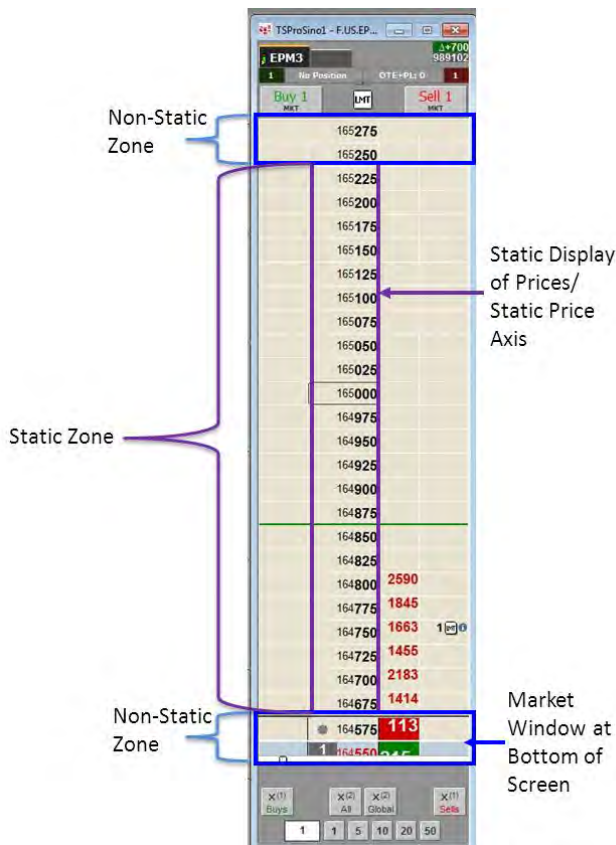
com·mon (kóm'ən), *adj.* 1. belonging equally to or shared alike by two or more or all in question: *common property; common interests.* 2. pertaining or belonging equally to an entire community, nation, or culture; public: *a common language.* 3. joint; **united:** *a common defense.* 4. widely and unfavorably known; notorious: *a common thief.* 5. **wide-spread; general:** *common knowledge.* 6. of frequent occurrence; usual; familiar: *a common mistake.* 7. hackneyed; trite. 8. of mediocre or inferior quality; mean; low: *a rough-textured suit of the most common fabric.* 9. coarse or vulgar: *common manners.* 10. having no rank, station, distinction, etc.; ordinary: *a common soldier.* 11. *Anat.* forming or formed by two or more parts or branches: *the common carotid arteries.* 12. *Pros.* (of a syllable) able to be considered as either long or short. 13. *Gram.* a. not belonging to an inflectional paradigm; fulfilling different functions which in some languages require different inflected forms: *English nouns are in the common case whether used as subject or object.* b. constituting a gender comprising nouns that were formerly masculine or feminine: *Swedish nouns are either common or neuter.* c. noting a word that may refer to either a male or a female. 14. *Math.* bearing a similar relation to two or more entities. —*n.* 15. Often, **commons**, a tract of land owned or used jointly by the members of a community, usually a pasture or a park. 16. *Law.* the right or liberty, in common with other persons, to take profit from the land or waters of another. 17. **commons**, a. the commonalty; the nonruling class. b. the body of people not of noble birth or not ennobled, as represented in England by the House of Commons. c. (*cap.*) the representatives of this body. d. (*cap.*) the House of Commons. e. a large dining room, esp. at a university or college. f. *Brit.* food provided in such a dining room. g. food or provisions for any group. 18. (*sometimes cap.*) *Eccles.* a. an office or form of service used on a festival of a particular kind. b. the ordinary of the Mass, esp. those parts sung by the choir. 19. *Obs.* a. the community or public. b. the common people. 20. **in common**, in joint possession or use; shared equally. [ME *comun* < OF < L *commun(is)* = *com-* *com-* + *mūnis* serviceable, obliging, akin to MEAN²] —**com'mon-ness**, *n.* —**Syn.** 5. **universal**, prevalent, popular. See **general**. 6. **customary**, everyday. 10. **COMMON**, **VULGAR**, **ORDINARY** refer, often with derogatory connotations of cheapness or inferiority, to what is usual or most often experienced. **COMMON** applies to what is accustomed, usually experienced, or inferior, to the opposite of what is exclusive or aristocratic: *She is a common person.* **VULGAR** properly means belonging to the people, or characteristic of common people; it connotes low taste, coarseness, or ill breeding: *the vulgar view of things; vulgar in manners and speech.* **ORDINARY** means what is to be expected in the usual order of things; or only average, or below average: *That is a high price for something of such ordinary quality.* —**Ant.** 1. individual, private, personal. 6. unusual, strange.

Voller Decl., Ex. D, at ¶ 31.

55. There is nothing in the provisional, specification, or file wrappers that states that the use of the term “axis” in the claims prohibits the use of other ranges of non-static price levels with a range of static price levels. Kurcz Decl., Ex. I at ¶ 52.

56. There is nothing in the provisional, specification, or file wrappers that states that the use of the term “display” in the claims that prohibits the use of the “static display of prices” with other features, such as non-static price levels. Kurcz Decl., Ex. I at ¶ 53.

57. CQG’s DOMTrader is “Trifurcated” in its default setting when a price is selected, having three parts: 1) a middle zone with a static display of prices or a static price axis; 2) a top, non-static zone; and 3) a bottom, non-static zone. In the versions of CQG’s products that TT accuses of literal infringement, the middle zone is in a “static” mode when a price is selected by a user. Further, in the same versions, a user may also configure the Market Window to be larger than the DOMTrader, and thus disable any Market Windows from appearing. Under this setting, the entire price scale is a static price axis.



Voller Decl., Ex. C, at 7-19.

58. The non-static zones in DOMTrader are areas in which a “Market Window” may appear, either on the top or bottom of the static display of prices. The addition of the top and bottom non-static zones does not affect the functionality of the static display of prices in the middle zone of the screen. Further, the size of the non-static zones is controlled by a user, who may alter the size by dragging the window splitter up or down to increase or decrease its size. Voller Decl., Ex. C, at p. 7.

59. The Market Window, as CQG refers to this feature in its manuals, is merely an additional window that may appear in the non-static zones of the DOMTrader whenever the best bid or best ask in the market would otherwise go off of the screen. *Id.*

60. For many years, from versions of CQGIC as early as 7.1817 until version 8.1865, a trader could not even place an order in the Market Window, which simply serves as a viewer window for the user to track the inside market. Voller Decl., Ex. C, at p. 12.

61. In the versions of CQG’s products that TT accuses of literal infringement, the appearance of a Market Window in the DOMTrader has no effect on the functionality of the middle zone, which is “static.” Voller Decl., Ex. C, at p. 11-13.

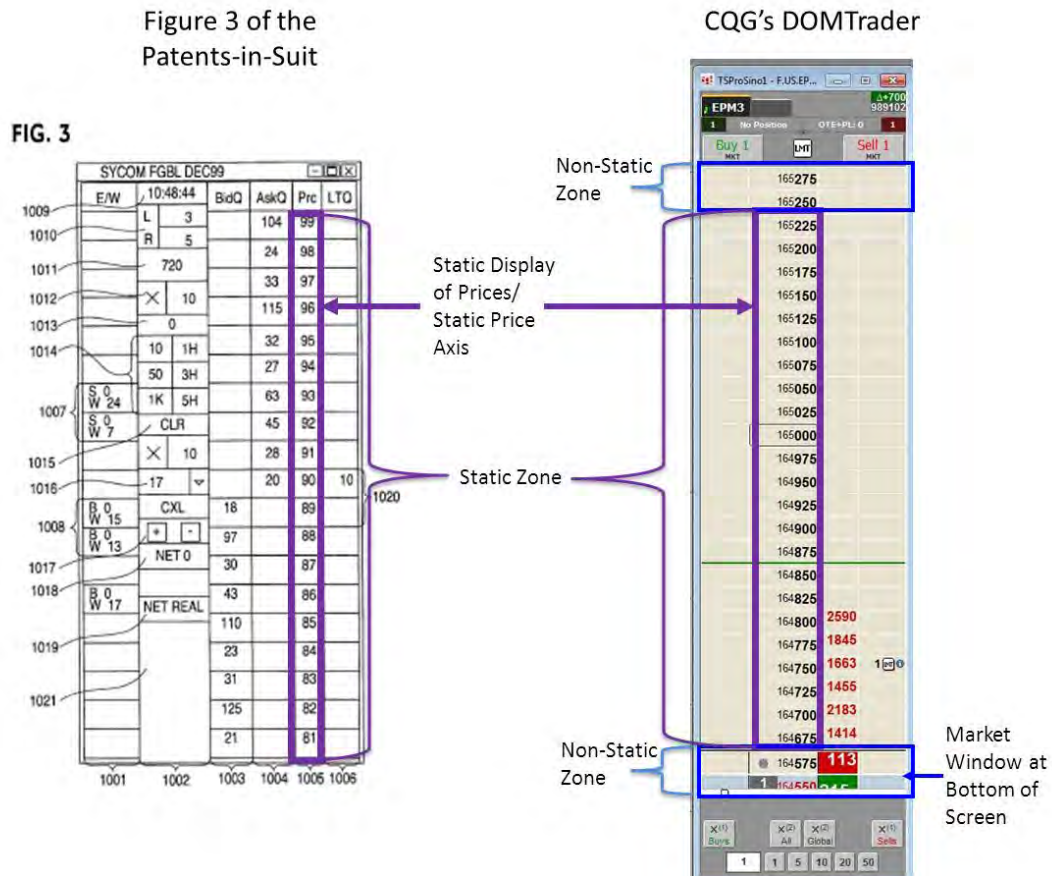
62. TT’s infringement contentions have repeatedly identified the static display of prices in the middle zone as forming the basis for infringement. Voller Decl., Ex. C, at p. 11-13, 15-16; *Id.*, Ex. C at Ex. A, Figs 1A, 2A, 2B; *Id.*, Ex. C at Ex. B, Figs 7A, 8A, 8B.

63. CQG’s former patent trial counsel, Mark Fischer, stated that TT’s infringement argument was “fairly persuasive.” Kurcz Decl., Ex. K.

64. At the time of his statement that TT’s infringement argument was “fairly persuasive,” Mr. Fischer worked at CQG. *Id.*

65. When Mr. Fischer served as trial counsel he was unaware that the product worked such that it included the middle zone of static price levels. He thought all of the price levels were not static, informing TT that the “automatic repositioning of the displayed prices cannot be turned off by the user.” Kurcz Decl., Ex. L.

66. DOMTrader has extra features on the top and bottom of the static display of prices that are not static, i.e., where a Market Window may appear to display the inside market.



Voller Decl., Exs. A and B at Fig. 3; *Id.*, Ex. C at Ex. B, Fig. 8A.

Respectfully submitted,

Date: May 16, 2014

s/ Andrea K. Orth

Leif R. Sigmond, Jr. (ID No. 6204980)
(sigmond@mbhb.com)

Matthew J. Sampson (ID No. 6207606)
(sampson@mbhb.com)

S. Richard Carden (ID No. 6269504)
(carden@mbhb.com)

Jennifer M. Kurcz (ID No. 6279893)
(kurcz@mbhb.com)

Andrea K. Orth (ID No. 6301900)
(orth@mbhb.com)

Brandon J. Kennedy (ID No. 6306310)
(kennedy@mbhb.com)

McDonnell Boehnen Hulbert & Berghoff LLP

300 South Wacker Drive

Chicago, Illinois 60606

Tel.: (312) 913-0001

Fax: (312) 913-0002

Steven F. Borsand (ID No. 6206597)

(Steve.Borsand@tradingtechnologies.com)

Trading Technologies International, Inc.

222 South Riverside

Suite 1100

Chicago, IL 60606

Tel: (312) 476-1000

Fax: (312) 476-1182

Attorneys for Plaintiff,

TRADING TECHNOLOGIES

INTERNATIONAL, INC.

CERTIFICATE OF SERVICE

I certify that a copy of the foregoing (1) RESPONSES AND OBJECTIONS TO CQG'S STATEMENT OF UNDISPUTED MATERIAL FACTS IN SUPPORT OF ITS MOTION FOR SUMMARY JUDGMENT AND (2) STATEMENT OF UNDISPUTED MATERIAL FACTS IN SUPPORT OF ITS CROSS-MOTION FOR PARTIAL SUMMARY JUDGMENT THAT THE "STATIC" LIMITATIONS MEET THE WRITTEN DESCRIPTION REQUIREMENT was served on May 16, 2014 as follows:

Via Filing Via this Court's CM-ECF System, which caused a copy to be served on all registered users and Via E-mail:

Counsel for CQG, Inc., and CQGT, LLC:

Adam G. Kelly
Loeb & Loeb LLP
321 N. Clark Street, Suite 2300
Chicago, IL 60654
akelly@loeb.com

Johnnet Simone Jones
Loeb & Loeb LLP
321 N. Clark Street, Suite 2300
Chicago, IL 60654
sjones@loeb.com

William Joshua Voller
Loeb & Loeb LLP
321 N. Clark Street, Suite 2300
Chicago, IL 60654
wvoller@loeb.com

s/ Andrea K. Orth

Exhibit I

FILED UNDER SEAL

I. QUALIFICATIONS

4. I am Professor of Finance, and Director of the Global Energy Management Institute at the Bauer College of Business of the University of Houston. Prior to joining the faculty of the University of Houston in January of 2003, I was the Watson Family Professor of Commodity and Financial Risk Management at Oklahoma State University. I assumed this endowed professorship in 2001 after holding research and teaching positions at the University of Michigan, the University of Chicago and Washington University. My curriculum vitae (attached as Exhibit 1) lists all of the publications that I have authored in the last ten years.

5. I have professional experience relating to, and expertise in, the subject matter of the '304 and '132 patents. This experience and expertise falls under three basic headings: research, teaching, and advisory. I consider each in turn.

6. I have researched the economics of financial, futures, and securities markets for most of my academic career. I have published scholarly articles concerning financial, securities and futures markets. I have written articles on the behavior of futures prices, the organization and governance of futures exchanges, and various aspects of futures market regulation, including the regulation of market manipulation.

7. Some of this research relates to what financial economists call the "microstructure" of financial markets, that is, how the process of executing financial transactions operates on futures and securities markets. Several of my published, peer-reviewed works address microstructural issues, including the microstructure of electronic futures markets.

8. Since no later than 1991, I have researched, and written upon, the characteristics of electronic futures transaction systems, their functionality, and the economic factors that influence their operation and design. Based on this research, I am aware of the major developments in electronic financial trading back to the 1960s, and have an understanding of the

design, operation, and functionality of a wide range of securities and futures automated transaction systems.

9. I have taught courses about futures and financial markets. My course on Financial Markets at Washington University analyzed the trading process on securities and futures markets in detail. I have also taught courses on derivatives and futures markets at the University of Michigan, the University of Chicago, Washington University, Oklahoma State University, and the University of Houston. Furthermore, I have taught executive education courses on derivatives and financial markets at Washington University and the University of Houston, and to employees of financial and non-financial firms in the United States and Europe. In my university and executive education derivatives and futures market courses I discuss microstructural issues.

10. My first full time job out of graduate school was as a senior investment strategist at a futures commission merchant in Chicago. While holding this position, I observed firsthand the open outcry trading process and also followed the development of electronic futures trading.

11. I have been retained in a variety of advisory roles relating to futures markets. Several of these roles were directly related to electronic trading.

12. I have advised exchanges in the United States, Canada, Germany, and Sweden regarding the design of futures contracts. I have also advised an exchange in Brazil regarding the design and regulation of its trading system.

13. Specifically with respect to the design of electronic systems for the execution of financial transactions, I advised two German exchanges, the Deutsche Terminbourse (now Eurex) and the Warenterminbourse (“WTB”), on matters relating directly to electronic trading. In 1994, I was retained by Deutsche Terminbourse (“DTB”) to evaluate the desirability of creating a new

class of trading members on the DTB electronic trading system in order to improve the liquidity of the DTB markets to enhance its competitive position vis a vis its non-electronic rival the London International Financial Futures and Options Exchange (“LIFFE”). Completion of this study required me to understand the process for executing transactions on an electronic trading platform. Based in large part upon the recommendations of the study I conducted, DTB decided not to establish such a new class of members. In 1995, I was retained as one of the primary investigators of a Catalyst Institute study of the feasibility and design of a European agricultural futures market, the Warenterminbourse (“WTB”). One of the objectives of this analysis was to determine whether the WTB should execute transactions via an electronic system, or whether it should instead employ a more traditional face-to-face “open outcry” floor trading system; Catalyst recommended the implementation of a computerized trading system. Pursuant to this recommendation, the Catalyst study of which I was a co-author specified various functionalities that the WTB system should incorporate to facilitate the efficient execution of financial transactions, including the functionalities of display and order screens.

14. In connection with the DTB and WTB assignments, I visited electronic trading operations in Germany, France, and Austria. During these visits, I observed demonstrations of transaction terminal functionality and operation. I also met with representatives of electronic futures exchanges from Sweden and Switzerland.

15. I have also testified on matters relating to futures markets. In addition to representing private companies in these matters, I have also been retained by government agencies—the Commodity Futures Trading Commission (“CFTC”) and the Federal Trade Commission—to analyze futures market related issues. I have served as an expert on issues pertaining to patents relating to electronic trading systems.

16. I have been invited to speak about electronic trading related issues at conferences sponsored by the Federal Reserve Bank of Chicago, the Financial Instruments Study Committee, and Yale Law School. I was selected to contribute the chapter on the impact of electronic trading on the organization of financial markets for the New Economy Handbook published by the Academic Press. I have made a presentation on financial market structure issues, including those pertaining to electronic trading, to the Board of Governors of the Federal Reserve.

17. I have been a member of the Commodity Futures Trading Commission Technology Advisory Board.

18. As a result of the qualifications set forth supra and in Exhibit A, I consider myself to be knowledgeable about and an expert in the fields of markets and trading, electronic trading, and graphical user interfaces associated with electronic markets.

II. MATERIALS CONSIDERED

19. In preparation for this declaration, I reviewed the following materials, from which I have based my opinions:

- a. U.S. Patent No. 6,772,132 (Ex. 2);
- b. U.S. Patent No. 6,766,304 (Ex. 3);
- c. Provisional Patent Application No. 60/186,322 (Ex. 4)
- d. File history for the '132 patent;
- e. File history for the '304 patent;
- f. *eSpeed* district court's claim construction memorandum and order, dated October 31, 2006, Dkt. No. 105;
- g. *eSpeed* district court's clarification order regarding claim construction, dated February 21, 2007, Dkt. No. 120;
- h. *eSpeed* Jury instructions (Ex. 5, Case No. 04-5312, Dkt. 1062));

- i. Briefs in *eSpeed* relating to motions for summary judgment with respect to written description (Case No. 04-cv-5312, Dkt. Nos. 544, 551, 589, 628, 647, 662, 672, 853, 987, 980);
- j. *eSpeed* district court's orders regarding written description challenges (Case No. 04-cv-5312, Dkt. 769 and Dkt. 1013);
- k. CQG's *Markman* briefing in the *eSpeed* case (Case No. 04-cv-5312, Dkt. Nos. 309, 407, 447), and the 7/28/2006 & 9/8/2007 deposition testimony and 5/30/2007 & 6/18/2007 reports of its expert, Richard Ferraro;
- l. Federal Circuit's opinion affirming the *eSpeed* district court's claim construction *TT v. eSpeed, Inc.*, 595 F.3d 1340 (Fed. Cir. 2010);
- m. Dr. Mellor's November 25, 2013 Expert Report and exhibits;
- n. Dr. Mellor's January 17, 2014 Declaration and exhibits;
- o. Dr. Mellor's April 25, 2014 deposition transcript;
- p. CQG's Memorandum of Law in Support of Its Motion for Summary Judgment that the Patents-in-Suit Are Invalid Under U.S.C. 112, Paragraph 1 For Lack of Written Description, Dkt. 712; CQG Statement of Material Facts In Support Thereof, Dkt. 719; and the Declaration of William J. Voller III in Support of CQG's Motion for Summary Judgment including exhibits and Dr. Mellor's March 16, 2014 Declaration, Dkt. 720 thru 720-24;
- q. The briefing regarding TT's Motions to Strike Dr. Mellor's Expert Report, Dkt. Nos. 589, 646, and 688 (Motion to Strike Based on Waiver), and Dkt. Nos. 592, 649, and 693 (Motion to Strike Based on Wrong Law);

r. The Federal Circuit's opinion in *TT v. Open E Cry, LLC*, 728 F.3d 1309 (Fed. Cir. 2013); and

s. This Court's opinion denying further claim construction in this case. Dkt. 735.

III. SUMMARY OF OPINIONS

20. The patent claim terms "static display of prices" and "common static price axis", and the Court's construction of that language is supported by the written description for the patents-in-suit. In particular, the written description of the '132 patent and '304 patent convey to persons skilled in the art that as of the filing date, the applicant was in possession of what is claimed.

IV. PERSON OF ORDINARY SKILL IN THE ART

21. In my opinion, one of ordinary skill in the art for purposes of this case is a person having (1) a bachelor's degree or equivalent experience and (2) two years of experience designing and/or programming graphical user interfaces, including experience designing and/or programming graphical user interfaces for electronic trading based on input from a person with knowledge of the needs of an electronic trader. I have more than the level of ordinary skill in the art described above. However, because of my background, I can speak about how one of ordinary skill in the art would have understood the teachings of the specification in early-to-mid 2000 (when the '322 provisional and the '132/'304 specification were both filed).

22. I have reviewed Dr. Mellor's January 17, 2014 declaration regarding the level of ordinary skill in the art. I do not agree with Dr. Mellor's assessment of the appropriate level of skill in the art. Nonetheless, even adopting his characterization of the level of ordinary skill in the art, my analysis below and my opinion remain unchanged. Any difference between Dr. Mellor's and my view of the level of ordinary skill in the art is not pertinent to the present issue. Here, the claims

require a “common static price axis”/”static display of prices” and the written description plainly supports such limitations. Thus, there is no variation in the analysis based on the level of ordinary skill in the art.

V. THE CLAIMS MEET THE WRITTEN DESCRIPTION REQUIREMENT

23. Although I am not a lawyer, I understand that the written description requirement is met if the patent specification reasonably conveys to one of ordinary skill that the inventors were in possession of the claimed subject matter as of the filing date. The patent owner need only describe what the patent claims—what is required by the claims. Further, I understand that to determine if the written description requirement is met, one must undertake an objective inquiry into the four corners of the specification from the perspective of a person of ordinary skill in the art. Also, I have been informed that there is no need to provide written description support for unclaimed features.

24. I also understand that patents are entitled to a presumption of validity. I understand that this presumption exists because there is a presumption that the U.S. Patent and Trademark Office has properly performed its administrative duty in granting the patent.

A. The Claims of the Patents-In-Suit

25. TT has asserted U.S. Patent Nos. 6,766,304 (“the ‘304 patent”) and 6,772,132 (“the ‘132 patent”) in this litigation. The patents-in-suit are both entitled “Click Based Trading with Intuitive Grid Display of Market Depth.” The patents share a common specification, but have different claims.

26. The ‘304 patent issued on July 20, 2004 and the ‘132 patent issued on August 3, 2004. The application that led to the ‘132 patent is Serial No. 09/590,962 (“the parent application”), and was filed on June 9, 2000. The application that led to the ‘304 patent was a divisional application from the parent application, and claims priority to the parent application. The parent

application claims priority to a provisional application filed on March 2, 2000 (60/186,322). The patents-in-suit both claim priority to the provisional application.

27. The '304 patent includes two independent claims, claim 1 and claim 27. For purposes of the written description analysis of the "static" terms, Claim 1 of the '304 patent is representative of the independent claims. Claim 1 of the '304 patent is as follows:

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

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

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

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

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

in response to a selection of a particular location of the order entry region by a single action of a user input

device, setting a plurality of parameters for a trade order relating to the commodity and sending the trade order to the electronic exchange.

Ex. 3 at 12:35-13:3.

28. The '132 patent includes three independent claims, claim 1, claim 8, and claim 14.

For purposes of the written description analysis of the "static" terms, Claim 1 is representative of the independent claims of the '132 patent. Claim 1 of the '132 patent states as follows:

1. A method of placing a trade order for a commodity on an electronic exchange having an inside market with a highest bid price and a lowest ask price, using a graphical user interface and a user input device, said method comprising:

setting a preset parameter for the trade order

displaying market depth of the commodity, through a dynamic display of a plurality of bids and a plurality of asks in the market for the commodity, including at least a portion of the bid and ask quantities of the commodity, the dynamic display being aligned with a static display of prices corresponding thereto, wherein the static display of prices does not move in response to a change in the inside market;

displaying an order entry region aligned with the static display prices comprising a plurality of areas for receiving commands from the user input devices to send trade orders, each area corresponding to a price of the static display of prices; and

selecting a particular area in the order entry region through single action of the user input device with a pointer of the user input device positioned over the particular area to set a plurality of additional parameters for the trade order and send the trade order to the electronic exchange.

Ex. 2 at 12:2-27.

B. The Construction of the “Static” Terms

29. I understand that Judge Moran construed the “static” terms found in the '132 and '304 Patents. I also understand that his claim construction of the "static" terms was appealed to the Federal Circuit, which reviewed his constructions and then affirmed.

30. I understand that Judge Moran construed the term “common static price axis” as set forth in the '304 patent as “a line comprising price levels that do not change positions unless a manual re-centering command is received and where the line of prices corresponding to at least one bid value and one ask value.” Dkt. 105 at p. 6.

31. Further, I understand that Judge Moran construed the term “common” as being synonymous with the phrase “visually or graphically in relationship with” as set forth in the jury instructions of the *TT v. eSpeed* trial and also explained in the *Markman* ruling “[t]hat market depth, which includes the best bid and the best ask, can be displayed on an angle gives further support to plaintiff’s contention that ‘common’ connotes no more than a relationship between the price axis and the bid and ask display regions.” Ex. 5 at p. 6; Dkt. 105 at 9.

32. I understand that Judge Moran construed the term “static display of prices” as set forth in the '132 patent as “a display of prices comprising price levels that do not change positions unless a manual re- centering command is received .” Dkt. 105 at p. 6.

33. I understand that Judge Moran clarified that a “static display of prices”/“common static price axis” could move in response to any type of manual movement or repositioning. In particular, he stated that “[o]ur earlier constructions remain, and we clarify that the price axis never changes positions unless by manual re-centering or re-positioning.” Dkt. 120 at p. 8. In other words, the construction permits movement of the price levels manually, such as by scrolling or re-centering.

34. I understand that Judge Moran’s constructions were affirmed by the Federal Circuit, including the notion that the “price axis never changes positions unless by manual re-centering or re-positioning” *TT v. eSpeed, Inc.*, 595 F.3d 1340, at 1353-54 (Fed. Cir. 2010).

35. I understand that Judge Moran’s claim construction is controlling in this case, as recently confirmed by this Court. Dkt. 735 at p. 8.

C. The “Static” Terms Are Supported By the Written Description

36. The asserted claims are supported by the provisional patent application and the specifications of the patents-in-suit. A person of ordinary skill in the art would have viewed the provisional application and the specification of the patents-in-suit as disclosing the “static” limitations of the patents-in-suit.

37. The provisional discloses “static” in both text and figures. The provisional states that the invention, known as Mercury, “displays a static vertical column of prices . . .” Ex. 4 at p. 23-24. In both the text and figure below, the provisional discloses a line comprising price levels that correspond to at least one bid value and one ask value.

In turn, Mercury further increases the speed of trading and the likelihood of entering orders at desired prices with desired quantities. Mercury displays a static vertical column of prices with the bids and asks displayed in vertical columns to the side of the price column. An example of this display follows:

EW		10:48:44	BldQ	AskQ	Prc	LTO
	L	3		104	99	
	R	5		24	98	
		720		33	97	
	X	10		115	96	
		0		32	95	
		10 1H		27	94	
		50 3H		63	93	
S 0		1K 6H		45	92	
W 24		CLR		29	91	
S 0		X 10		20	90	10
W 7		17				
		CXL	18		89	
B 0		+ -	97		88	
W 15		NET 0	30		87	
B 0			43		86	
W 13		NET REAL	110		85	
			23		84	
			31		83	
			125		82	
			21		81	

Bid quantities are in the blue column and ask quantities are in the red column. In this example, the inside market is 18 (best bid quantity) at 89 (best bid price) and 20 (best ask quantity) at 90 (best ask price).

38. After describing the display of prices as “static”, the provisional juxtaposes the figure above with one in which the market has moved up three ticks, i.e. from a best bid price of 89/best ask price of 90 to a market in which the best bid price is 92 and the best ask price is 93:

INNOVATION #12: THE DYNAMIC, VERTICAL DISPLAY OF MARKET MOVEMENT

The inside market and market depth ascend and descend as prices in the market increase and decrease. For example, the following screen depicts the same market at a later interval where the inside market has risen three ticks:

SYCOM FGBL DEC99					
EW	10:48:44	BidO	AskO	Prc	LTO
	L 3		104	99	
	R 5		24	98	
	720		33	97	
	X 10		115	96	
	0		32	95	
	10 1H		27	94	
	60 3H		63	93	10
S 10 W 14	1K 5H				
	CLR	43		92	
	X 10	125		91	
	17 -	97		90	
R 0 W 15	CXL	18		89	
B 0 W 13	* -	97		88	
	NET 0	30		87	
B 0 W 17	NET REAL	43		86	
		110		85	
		23		84	
		31		83	
		125		82	
		21		81	

Ex. 4 at p. 29.

39. The provisional then goes on to explain that in this case, “The price column remained static, but the corresponding bids and asks rose up the price column.”

Now the inside market is at Price: 93 with the AskQ: 63 and the BidQ: 43. The price column remained static, but the corresponding bids and asks rose up the price column. Market Depth similarly ascends and descends the price column, leaving a vertical history of the market.

Ex. 4 at p. 30.

40. Again, the provisional discusses that “the market ascends or descends the price column . . .” Ex. 4 at p. 35.

41. The provisional discloses manual re-positioning of the price axis. Ex. 4, at p. 35.

42. The provisional discloses manual re-centering. Ex. 4, at p. 35.

43. Thus, the provisional alone fully supports that the inventor possessed the “static” terms as construed at the time of the filing of the provisional application. Both the text and drawings expressly disclose that the inventors had invented “a display [line] of prices comprising price levels that do not change positions unless a manual re-centering command is received [and where the line of prices corresponding to at least one bid value and one ask value].”

44. In summary, the provisional expressly discloses the claimed “static” limitations in both text and figures. Because the provisional’s disclosure is explicit and consistent throughout, my analysis does not change regardless of the level or ordinary skill in the art.

45. The text and drawings from the specification of the patents-in-suit make the same disclosure as the provisional application, and similarly support the “static” limitations. For example, Figures 3 and 4 of the patents-in-suit are similar to the figures I referenced above from the provisional application. Figures 3 and 4 of the patents-in-suit have been reproduced below with additional highlighting:

FIG. 3

SYCOM FGBL DEC99						
E/W	10:48:44	BidQ	AskQ	Prc	LTO	
1009	L 3		104	99		
1010	R 5		24	98		Offers to sell
1011	720		33	97		
1012	X 10		115	96		
1013	0		32	95		
1014	10 1H		27	94		
	50 3H		63	93		
1007	S 0 W 24		45	92		
	S 0 W 7		28	91		
1015	X 10		20	90	10	
1016	17		18	89	1020	
1008	B 0 W 15		97	88		
	B 0 W 13		30	87		
1017	NET 0		43	86		
1018	B 0 W 17		110	85		
	NET REAL		23	84		
1019			31	83		
1021			125	82		
			21	81		Offers to buy

FIG. 4

SYCOM FGBL DEC99						
E/W	10:48:44	BidQ	AskQ	Prc	LTO	
	L 3		104	99		
	R 5		24	98		
	720		33	97		
	X 10		115	96		
	0		32	95		
	10 1H		27	94		
	50 3H		63	93	10	
	S W		43	92		1101
	CLR		28	91		
	X 10	125	97	90		
	17		18	89		
	CXL		97	88		
	B 0 W 15		30	87		
	B 0 W 13		43	86		
	NET 0		110	85		
	B 0 W 17		23	84		
	NET REAL		31	83		
			125	82		
			21	81		

The specification of the patents-in-suit also discloses that “in comparing FIGS. 3 and 4, it can be seen that the price column remained static, but the corresponding bids and asks rose up the price column.” Ex. 2 at 8:44-47; Ex. 3 at 9:9-12; *see also* Ex. 2 at 7:29-31; Ex. 3 at 7:48-50 (“In the preferred embodiment of the invention, the Mercury display is a static vertical column of prices”); Ex. 2 at 7:46; Ex. 3 at 7:65 (“The values in the price column are static . . .”).

46. In view of the disclosure of the “common static price axis”/“static display of prices” and the explanation of how the bids and asks move relative to the static price axis/static display of

prices, it is my opinion that a person of ordinary skill in the art would understand the written description of the patents-in-suit to disclose the “static” limitations as construed.

D. With Respect to the “Static” Terms, The Claims Do Not Omit a Required or Essential Feature And The Written Description Does Not Include Any Disclaimer or Disavowal That Would Preclude “Static” Price Levels From Being Used With Non-static Price Levels

47. I have been asked to opine on whether the provisional, specification or file histories describe an essential or required feature pertaining to "static" that is not present in the claims. After reviewing the written description and file histories, I conclude that there is no such essential or required feature described that is missing from the claims. Rather, the claims are claiming the identical “static” feature disclosed in the patent. Non-static price levels are not required by the claims and are not described in the patent.

48. I have also been asked to review the provisional, specifications, and file histories to determine if there has been any clear and unambiguous disclaimer that would preclude a “common static price axis/static display of prices” from being used with an additional range or zone of non-static price levels: i.e. that requires all displayed price levels to be static. After reviewing the provisional, specifications, and file histories, I conclude that there is no such clear and unambiguous disclaimer. Indeed, these materials do not even remotely hint to such a requirement or disclaimer.

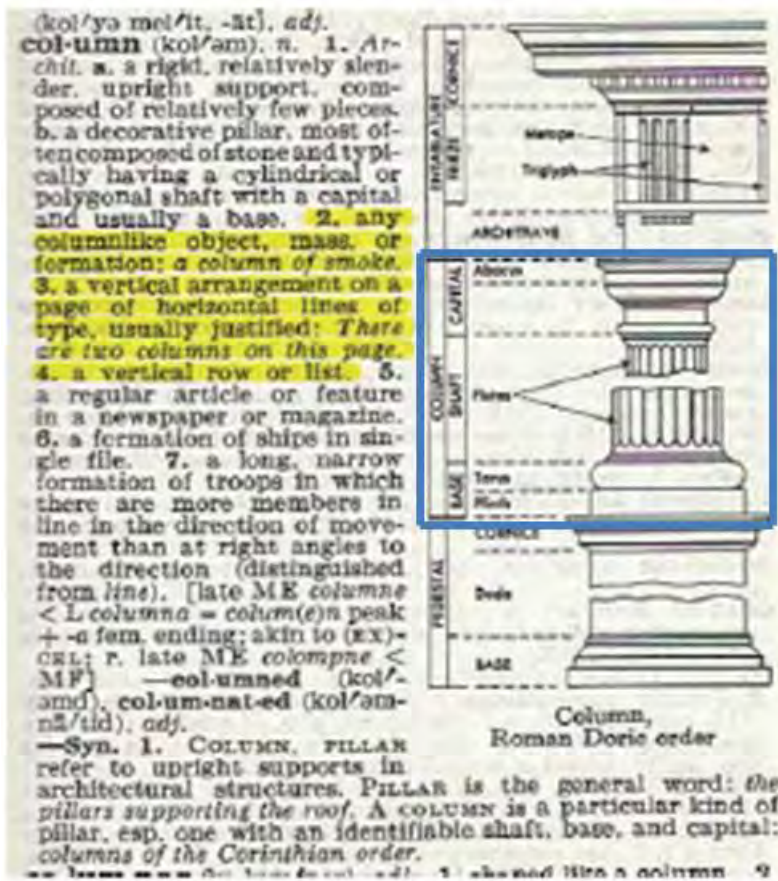
49. Moreover, there is no statement in the provisional, specifications, or file histories distinguishing any prior art reference based on such prior art having some but not all prices static, i.e., not having all displayed prices static.

50. I have reviewed Dr. Mellor’s report and declaration and nothing Dr. Mellor cites changes my opinion.

51. For example, I disagree with Dr. Mellor’s assertion that the use of the term “column” in the specification suggests that the disclosed “static display of prices”/“common static

price axis” cannot be used with non-static price levels. The definitions of “column” referred to by Dr. Mellor do not support Dr. Mellor’s conclusion. In fact, the dictionary cited by Dr. Mellor supports the opposite conclusion. The figure in the dictionary definition (see below) shows a column which has within it multiple segments, each with a different appearance (in blue below):

(a) From The Random House College Dictionary (1980) (Ex. 13):



52. I have reviewed Dr. Mellor’s discussion regarding the curly brackets used in the figures of the patents-in-suit to identify the inside market and the static display of prices. March 16, 2014 Mellor Dec. at ¶¶ 42-45. No reasonable person, including a person of ordinary skill in the art, would interpret such brackets as intentionally limiting the scope of the invention and precluding its use with additional features. Instead, it is my understanding that the use of curly brackets in figures is a common practice in patents as a method of identifying and pointing to features being discussed

in the specification. Dr. Mellor identifies no statements in the provisional, specification, or file wrappers that would assign the limited meaning Dr. Mellor attributes to such brackets. Instead, brackets are used to identify features, not to limit. Indeed, nothing in the written description states that all price levels identified by curly brackets must be static.

53. I disagree with Dr. Mellor's assertion that a person of ordinary skill in the art would understand that "common" means "universal." March 16, 2014 Mellor Dec. at ¶ 31. The Court already construed "common" as "in relationship with" and specifically noted that the fact "that market depth, which includes the best bid and best ask, can be displayed on an angle gives further support to plaintiff's contentions that 'common' connotes no more than a relationship between the price axis and the bid and ask display regions." Dkt. 105 at p. 9. Nothing Dr. Mellor cites from the extrinsic record changes my opinion, and instead, actually supports Judge Moran's construction. For example, while Dr. Mellor relies on the 1980 Random House College Dictionary for his definition of "common", the first definition cited supports Judge Moran's construction: "belonging equally to or shared alike by two or more or all in question." March 16, 2014 Mellor Dec. at ¶ 31.

54. I disagree with Dr. Mellor that the use of the term "axis" in the claim supports in any way that the disclosed range of static price levels cannot be used with other ranges of non-static price levels. There is nothing in the provisional, specification, or file wrappers that states that the use of the term "axis" in the claims of the '304 patent prohibits the use of other ranges of non-static price levels with a range of static price levels.

55. Finally, I disagree that a person of ordinary skill in the art would understand "display" to mean that the screen "displays prices and that all visible prices in the display are static." *Compare* March 16, 2014 Mellor Dec. at ¶ 36. There is nothing in the term "display" that prohibits

the use of the “static display of prices” with other features, such as non-static price levels, and I note that Dr. Mellor does not identify any support for his interpretation.

VI. RESERVATION OF RIGHT TO SUPPLEMENT THIS REPORT AND OPINIONS

54. This report presents my opinions to date. As additional data, information, testimony, or expert reports from the various defendants become available to me or are provided to me, I may consider this information and I may find it appropriate to revise or supplement my analysis, opinions, and conclusions. Thus, I reserve the right to modify or supplement this report and the opinions contained herein.

55. I declare under penalty of perjury that the foregoing is true and correct and that this declaration was executed on May 16, 2014 in Houston, Texas.

Executed on 16 May, 2016

Dr. Craig Purroy

Exhibit 1

CRAIG PIRRONG

Professor of Finance
Director, Global Energy Management Institute
Bauer College of Business University of
Houston
Houston, TX 77204
713-743-4466
cpirrong@uh.edu

EDUCATION

Ph.D., UNIVERSITY OF CHICAGO, December, 1987.

Thesis: An Application of Core Theory to the Study of the Organization of Ocean Shipping Markets.

M.B.A., UNIVERSITY OF CHICAGO, March, 1983.

Concentrations in finance, economics and econometrics.

B.A., THE UNIVERSITY OF CHICAGO, June, 1981.

Major in economics.

THE UNITED STATES NAVAL ACADEMY, July, 1977-August, 1979.

EMPLOYMENT

BAUER COLLEGE OF BUSINESS, UNIVERSITY OF HOUSTON, Houston, TX. Professor of Finance and Director, Global Energy Management Institute, 2003-present.

OKLAHOMA STATE UNIVERSITY, Stillwater, OK. Watson Family Professor of Commodity and Financial Risk Management and Director, Center for Risk Management, 2001-2003.

WASHINGTON UNIVERSITY, OLIN SCHOOL OF BUSINESS, St. Louis, MO.
Assistant Professor of Finance, 1996-2001.

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FELLOWSHIPS

Oscar Mayer Fellow, University of Chicago (1983-1986)

RESEARCH GRANTS

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PERSONAL

Married to Terry Lehman Pirrong. Two children: Renee Elise and Genevieve Corinne. Hobbies: history (especially U.S. Civil War), agonizing over Chicago sports teams, and exercise.

DR. CRAIG PIRRONG
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Exhibit 2



US006772132B1

(12) **United States Patent**
Kemp, II et al.

(10) **Patent No.:** **US 6,772,132 B1**
(45) **Date of Patent:** **Aug. 3, 2004**

(54) **CLICK BASED TRADING WITH INTUITIVE GRID DISPLAY OF MARKET DEPTH**

5,845,266 A 12/1998 Lupien et al. 705/37
5,915,245 A 6/1999 Patterson, Jr. et al. 705/35
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(75) Inventors: **Gary Allan Kemp, II**, Winnetka, IL (US); **Jens-Uwe Schluetter**, Evanston, IL (US); **Harris Brumfield**, Chicago, IL (US)

(List continued on next page.)

(73) Assignee: **Trading Technologies International, Inc.**, Chicago, IL (US)

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 245 days.

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WO	WO 01/88808		11/2001

(21) Appl. No.: **09/590,692**

(22) Filed: **Jun. 9, 2000**

Related U.S. Application Data

(60) Provisional application No. 60/186,322, filed on Mar. 2, 2000.

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(51) **Int. Cl.**⁷ **G06F 17/60**

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Kharouf, A trading room with a view, *Fututes*, 27,11, Nov. 1998.*

(58) **Field of Search** **705/35, 36, 37, 705/10, 14; 345/814**

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Primary Examiner—Richard Weisberger

(74) *Attorney, Agent, or Firm*—Foley & Lardner

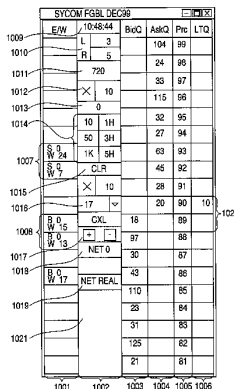
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(57) **ABSTRACT**

A method and system for reducing the time it takes for a trader to place a trade when electronically trading on an exchange, thus increasing the likelihood that the trader will have orders filled at desirable prices and quantities. The "Mercury" display and trading method of the present invention ensure fast and accurate execution of trades by displaying market depth on a vertical or horizontal plane, which fluctuates logically up or down, left or right across the plane as the market prices fluctuates. This allows the trader to trade quickly and efficiently.

56 Claims, 6 Drawing Sheets



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Page 2

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FIG. 1

CONNECTION TO MULTIPLE EXCHANGES

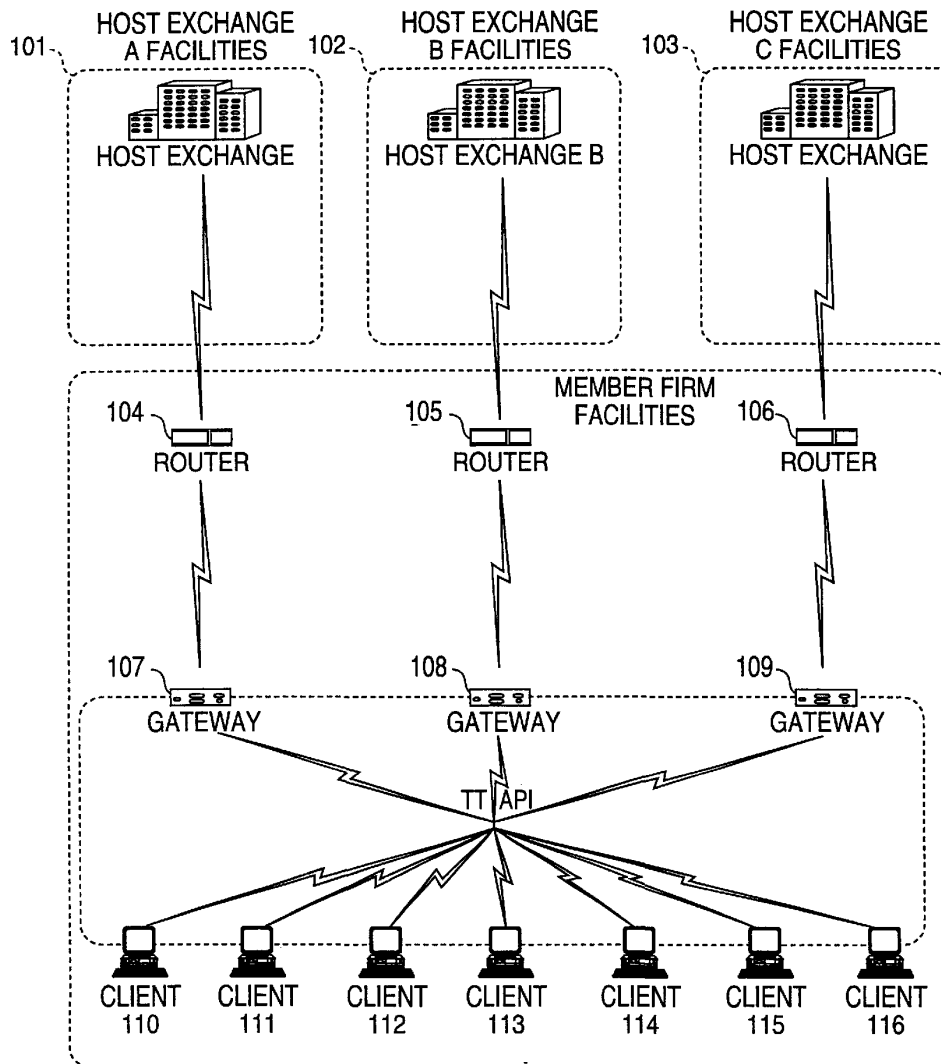


FIG. 2

		201	202	203	204	205			
	Contract	Depth	BidQty	BidPrc	AskPrc	AskQty	LastPrc	LastQty	Total
1	CDHO	•	785	7626	7627	21	7627	489	8230
2			626	7625	7629	815			
3			500	7624	7630	600			
4			500	7623	7631	2456			
5			200	7622	7632	800			

FIG. 3

SYCOM FGBL DEC99						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E/W	10:48:44		BidQ	AskQ	Prc	LTQ			
1009	L	3		104	99				
1010	R	5		24	98				
1011	720			33	97				
1012	×	10		115	96				
1013	0			32	95				
1014	10	1H		27	94				
	50	3H		63	93				
1007	S 0 W 24	1K 5H		45	92				
	S 0 W 7	CLR		28	91				
1015	×	10		20	90	10	1020		
1016	17	▼		18	89				
1008	B 0 W 15	CXL	18		88				
	B 0 W 13	+ -	97		87				
1017	NET 0		30		86				
1018	B 0 W 17	NET REAL	43		85				
1019			110		84				
			23		83				
			31		82				
1021			125		81				
			21						

FIG. 4

SYCOM FGBL DEC99						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E/W	10:48:44		BidQ	AskQ	Prc	LTQ			
	L	3		104	99				
	R	5		24	98				
	720			33	97				
	×	10		115	96				
	0			32	95				
	10	1H		27	94				
	50	3H		63	93	10	} 1101		
S 10 W 14	1K	5H		43	92				
	CLR		43		91				
	×	10	125		90				
	17	▼	97		89				
B 0 W 15	CXL		18		88				
B 0 W 13	+	-	97		87				
	NET 0		30		86				
			43		85				
B 0 W 17	NET REAL		110		84				
			23		83				
			31		82				
			125		81				
			21						

FIG. 5

SYCOM FGBL DEC99					
E/W	10:48:44	BidQ	AskQ	Prc	LTQ
	L 3		104	99	
	R 5		24	98	
	720		33	97	
	X 10		115	96	
	0		32	95	
	10 1H		27	94	
	50 3H		63	93	
S 0 W 24	1K 5H		45	92	
S 0 W 7	CLR		28	91	
	X 10		20	90	10
	17 ▾		18	89	
B 0 W 15	CXL	18		89	
B 0 W 13	+ -	97		88	
	NET 0	30		87	
		43		86	
B 0 W 17	NET REAL	110		85	
		23		84	
		31		83	
		125		82	
		21		81	

1206

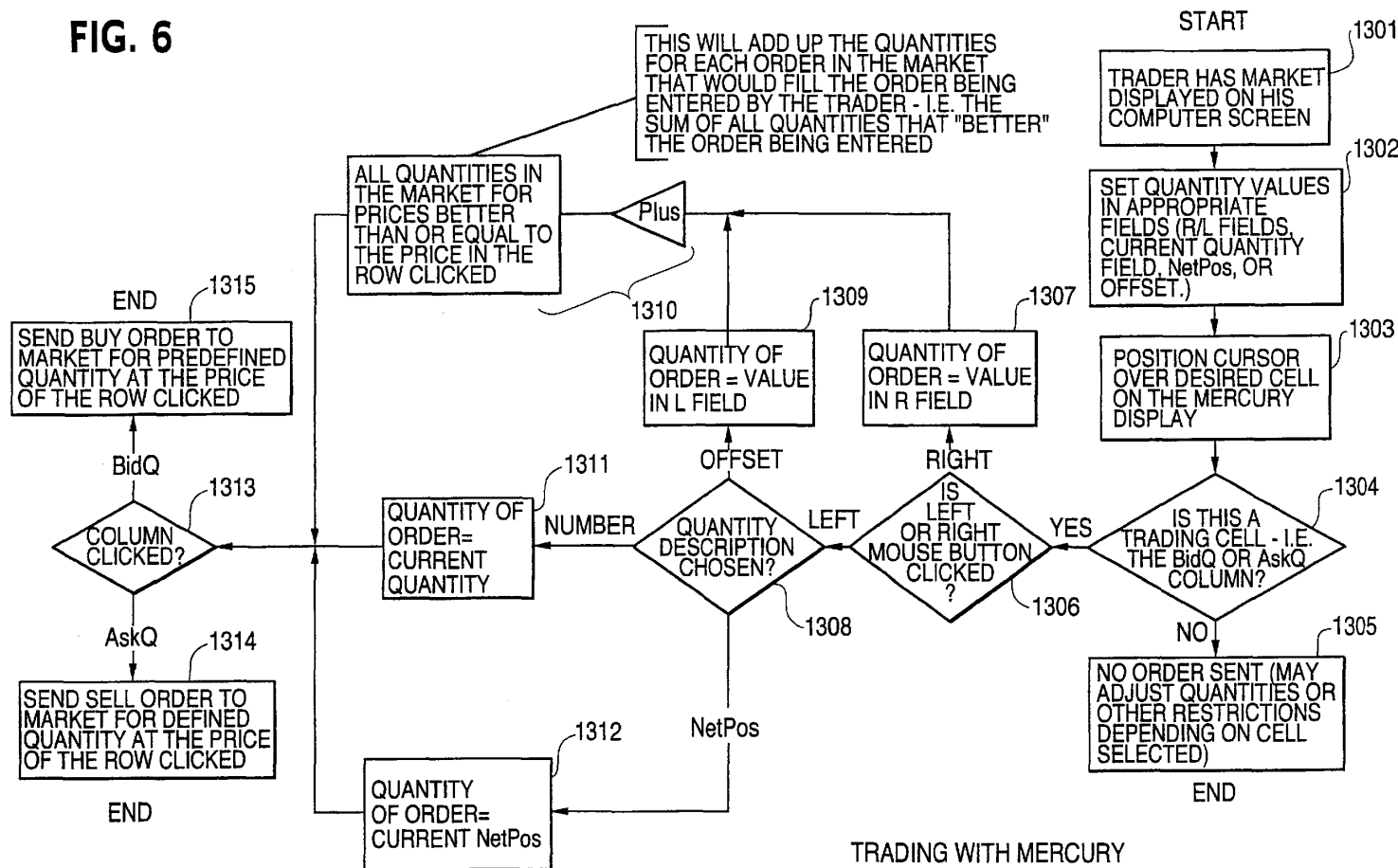
1205

1204

1208

1201 1202 1203 1207

FIG. 6



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CLICK BASED TRADING WITH INTUITIVE GRID DISPLAY OF MARKET DEPTH

PRIORITY

The present application claims priority to a U.S. Provisional Patent Application No. 60/186,322 entitled "Market Depth Display Click Based Trading and Mercury Display" filed Mar. 2, 2000, the contents of which are incorporated herein by reference.

FIELD OF INVENTION

The present invention is directed to the electronic trading of commodities. Specifically, the invention provides a trader with a versatile and efficient tool for executing trades. It facilitates the display of and the rapid placement of trade orders within the market trading depth of a commodity, where a commodity includes anything that can be traded with quantities and/or prices.

BACKGROUND OF THE INVENTION

At least 60 exchanges throughout the world utilize electronic trading in varying degrees to trade stocks, bonds, futures, options and other products. These electronic exchanges are based on three components: mainframe computers (host), communications servers, and the exchange participants' computers (client). The host forms the electronic heart of the fully computerized electronic trading system. The system's operations cover order-matching, maintaining order books and positions, price information, and managing and updating the database for the online trading day as well as nightly batch runs. The host is also equipped with external interfaces that maintain uninterrupted online contact to quote vendors and other price information systems.

Traders can link to the host through three types of structures: high speed data lines, high speed communications servers and the Internet. High speed data lines establish direct connections between the client and the host. Another connection can be established by configuring high speed networks or communications servers at strategic access points worldwide in locations where traders physically are located. Data is transmitted in both directions between traders and exchanges via dedicated high speed communication lines. Most exchange participants install two lines between the exchange and the client site or between the communication server and the client site as a safety measure against potential failures. An exchange's internal computer system is also often installed with backups as a redundant measure to secure system availability. The third connection utilizes the Internet. Here, the exchange and the traders communicate back and forth through high speed data lines, which are connected to the Internet. This allows traders to be located anywhere they can establish a connection to the Internet.

Irrespective of the way in which a connection is established, the exchange participants' computers allow traders to participate in the market. They use software that creates specialized interactive trading screens on the traders' desktops. The trading screens enable traders to enter and execute orders, obtain market quotes, and monitor positions. The range and quality of features available to traders on their screens varies according to the specific software application being run. The installation of open interfaces in the development of an exchange's electronic strategy means users can choose, depending on their trading style and internal requirements, the means by which they will access the exchange.

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The world's stock, bond, futures and options exchanges have volatile products with prices that move rapidly. To profit in these markets, traders must be able to react quickly. A skilled trader with the quickest software, the fastest communications, and the most sophisticated analytics can significantly improve his own or his firm's bottom line. The slightest speed advantage can generate significant returns in a fast moving market. In today's securities markets, a trader lacking a technologically advanced interface is at a severe competitive disadvantage.

Irrespective of what interface a trader uses to enter orders in the market, each market supplies and requires the same information to and from every trader. The bids and asks in the market make up the market data and everyone logged on to trade can receive this information if the exchange provides it. Similarly, every exchange requires that certain information be included in each order. For example, traders must supply information like the name of the commodity, quantity, restrictions, price and multiple other variables. Without all of this information, the market will not accept the order. This input and output of information is the same for every trader.

With these variables being constant, a competitive speed advantage must come from other aspects of the trading cycle. When analyzing the time it takes to place a trade order for a given commodity, various steps contribute in different amounts to the total time required. Approximately 8% of the total time it takes to enter an order elapses between the moment the host generates the price for the commodity and the moment the client receives the price. The time it takes for the client application to display the price to the trader amounts to approximately 4%. The time it takes for a trade order to be transmitted to the host amounts to approximately 8%. The remainder of the total time it takes to place an order, approximately 80%, is attributable to the time required for the trader to read the prices displayed and to enter a trade order. The present invention provides a significant advantage during the slowest portion of the trading cycle—while the trader manually enters his order. Traders recognize that the value of time savings in this portion may amount to millions of dollars annually.

In existing systems, multiple elements of an order must be entered prior to an order being sent to market, which is time consuming for the trader. Such elements include the commodity symbol, the desired price, the quantity and whether a buy or a sell order is desired. The more time a trader takes entering an order, the more likely the price on which he wanted to bid or offer will change or not be available in the market. The market is fluid as many traders are sending orders to the market simultaneously. It fact, successful markets strive to have such a high volume of trading that any trader who wishes to enter an order will find a match and have the order filled quickly, if not immediately. In such liquid markets, the prices of the commodities fluctuate rapidly. On a trading screen, this results in rapid changes in the price and quantity fields within the market grid. If a trader intends to enter an order at a particular price, but misses the price because the market prices moved before he could enter the order, he may lose hundreds, thousands, even millions of dollars. The faster a trader can trade, the less likely it will be that he will miss his price and the more likely he will make money.

SUMMARY OF THE INVENTION

The inventors have developed the present invention which overcomes the drawbacks of the existing trading systems

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and dramatically reduces the time it takes for a trader to place a trade when electronically trading on an exchange. This, in turn, increases the likelihood that the trader will have orders filled at desirable prices and quantities.

The "Mercury" display and trading method of the present invention ensure fast and accurate execution of trades by displaying market depth on a vertical or horizontal plane, which fluctuates logically up or down, left or right across the plane as the market prices fluctuates. This allows the trader to trade quickly and efficiently.

Specifically, the present invention is directed to a graphical user interface for displaying the market depth of a commodity traded in a market, including a dynamic display for a plurality of bids and for a plurality of asks in the market for the commodity and a static display of prices corresponding to the plurality of bids and asks. In this embodiment the pluralities of bids and asks are dynamically displayed in alignment with the prices corresponding thereto. Also described herein is a method and system for placing trade orders using such displays.

These embodiments, and others described in greater detail herein, provide the trader with improved efficiency and versatility in placing, and thus executing, trade orders for commodities in an electronic exchange. Other features and advantages of the present invention will become apparent to those skilled in the art from the following detailed description. It should be understood, however, that the detailed description and specific examples, while indicating preferred embodiments of the present invention, are given by way of illustration and not limitation. Many changes and modifications within the scope of the present invention may be made without departing from the spirit thereof, and the invention includes all such modifications.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 illustrates the network connections between multiple exchanges and client sites;

FIG. 2 illustrates screen display showing the inside market and the market depth of a given commodity being traded;

FIG. 3 illustrates the Mercury display of the present invention;

FIG. 4 illustrates the Mercury display at a later time showing the movement of values when compared to FIG. 3;

FIG. 5 illustrates a Mercury display with parameters set in order to exemplify the Mercury trading method; and

FIG. 6 is a flowchart illustrating the process for Mercury display and trading.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

As described with reference to the accompanying figures, the present invention provides a display and trading method to ensure fast and accurate execution of trades by displaying market depth on a vertical or horizontal plane, which fluctuates logically up or down, left or right across the plane as the market prices fluctuates. This allows the trader to place trade orders quickly and efficiently. A commodity's market depth is the current bid and ask prices and quantities in the market. The display and trading method of the invention increase the likelihood that the trader will be able to execute orders at desirable prices and quantities.

In the preferred embodiment, the present invention is implemented on a computer or electronic terminal. The computer is able to communicate either directly or indirectly (using intermediate devices) with the exchange to receive

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and transmit market, commodity, and trading order information. It is able to interact with the trader and to generate contents and characteristics of a trade order to be sent to the exchange. It is envisioned that the system of the present invention can be implemented on any existing or future terminal or device with the processing capability to perform the functions described herein. The scope of the present invention is not limited by the type of terminal or device used. Further, the specification refers to a single click of a mouse as a means for user input and interaction with the terminal display as an example of a single action of the user. While this describes a preferred mode of interaction, the scope of the present invention is not limited to the use of a mouse as the input device or to the click of a mouse button as the user's single action. Rather, any action by a user within a short period of time, whether comprising one or more clicks of a mouse button or other input device, is considered a single action of the user for the purposes of the present invention.

The system can be configured to allow for trading in a single or in multiple exchanges simultaneously. Connection of the system of the present invention with multiple exchanges is illustrated in FIG. 1. This figure shows multiple host exchanges **101–103** connected through routers **104–106** to gateways **107–109**. Multiple client terminals **110–116** for use as trading stations can then trade in the multiple exchanges through their connection to the gateways **107–109**. When the system is configured to receive data from multiple exchanges, then the preferred implementation is to translate the data from various exchanges into a simple format. This "translation" function is described below with reference to FIG. 1. An applications program interface ("TT API" as depicted in the figure) translates the incoming data formats from the different exchanges to a simple preferred data format. This translation function may be disposed anywhere in the network, for example, at the gateway server, at the individual workstations or at both. In addition, the storage at gateway servers and at the client workstations, and/or other external storage cache historical data such as order books which list the client's active orders in the market; that is, those orders that have neither been filled nor cancelled. Information from different exchanges can be displayed at one or in multiple windows at the client workstation. Accordingly, while reference is made through the remainder of the specification to a single exchange to which a trading terminal is connected, the scope of the invention includes the ability to trade, in accordance with the trading methods described herein, in multiple exchanges using a single trading terminal.

The preferred embodiments of the present invention include the display of "Market Depth" and allow traders to view the market depth of a commodity and to execute trades within the market depth with a single click of a computer mouse button. Market Depth represents the order book with the current bid and ask prices and quantities in the market. In other words, Market Depth is each bid and ask that was entered into the market, subject to the limits noted below, in addition to the inside market. For a commodity being traded, the "inside market" is the highest bid price and the lowest ask price.

The exchange sends the price, order and fill information to each trader on the exchange. The present invention processes this information and maps it through simple algorithms and mapping tables to positions in a theoretical grid program or any other comparable mapping technique for mapping data to a screen. The physical mapping of such information to a screen grid can be done by any technique

known to those skilled in the art. The present invention is not limited by the method used to map the data to the screen display.

How far into the market depth the present invention can display depends on how much of the market depth the exchange provides. Some exchanges supply an infinite market depth, while others provide no market depth or only a few orders away from the inside market. The user of the present invention can also chose how far into the market depth to display on his screen.

FIG. 2 illustrates a screen display of an invention described in a commonly owned co-pending application entitled "Click Based Trading with Market Depth Display" Ser. No. 09/589,751, filed on Jun. 9, 2000, the contents of which are incorporated herein by reference. This display shows the inside market and the market depth of a given commodity being traded. Row 1 represents the "inside market" for the commodity being traded which is the best (highest) bid price and quantity and the best (lowest) ask price and quantity. Rows 2-5 represent the "market depth" for the commodity being traded. In the preferred embodiment of the present invention, the display of market depth (rows 2-5) lists the available next-best bids, in column 203, and asks, in column 204. The working bid and ask quantity for each price level is also displayed in columns 202 and 205 respectively (inside market—row 1). Prices and quantities for the inside market and market depth update dynamically on a real time basis as such information is relayed from the market.

In the screen display shown in FIG. 2, the commodity (contract) being traded is represented in row 1 by the character string "CDHO". The Depth column 208 will inform the trader of a status by displaying different colors. Yellow indicates that the program application is waiting for data. Red indicates that the Market Depth has failed to receive the data from the server and has "timed out." Green indicates that the data has just been updated. The other column headings in this and all of the other figures, are defined as follows. BidQty (Bid Quantity): the quantity for each working bid, BidPrc (Bid Price): the price for each working bid, AskPrc (Ask Price): the price for each working ask, AskQty (Ask Quantity): the quantity for each working ask, LastPrc (Last Price): the price for the last bid and ask that were matched in the market and LastQty (Last Quantity): the quantity traded at the last price. Total represents the total quantity traded of the given commodity.

The configuration of the screen display itself informs the user in a more convenient and efficient manner than existing systems. Traders gain a significant advantage by seeing the market depth because they can see trends in the orders in the market. The market depth display shows the trader the interest the market has in a given commodity at different price levels. If a large amount of bids or asks are in the market near the trader's position, he may feel he should sell or buy before the inside market reaches the morass of orders. A lack of orders above or below the inside market might prompt a trader to enter orders near the inside market. Without seeing the market depth, no such strategies could be utilized. Having the dynamic market depth, including the bid and ask quantities and prices of a traded commodity aligned with and displayed below the current inside market of the commodity conveys the information to the user in a more intuitive and easily understandable manner. Trends in the trading of the commodity and other relevant characteristics are more easily identifiable by the user through the use of the present invention.

Various abbreviations are used in the screen displays, and specifically, in the column headings of the screen displays

reproduced herein. Some abbreviations have been discussed above. A list of common abbreviations and their meanings is provided in Table 1.

TABLE I

Abbreviations	
COLUMN	DESCRIPTION
Month	Expiration Month/Year
Bid Mbr ₍₁₎	Bid Member ID
WrkBuys ₍₂₎	Working Buys for entire Group ID
BidQty	Bid Quantity
ThrshBid ₍₆₎	Threshold Bid Price
BidPrc	Bid Price
Bid Qty Accum	Accumulated Bid Quantity
BidPrc Avg	Bid Price Average
AskPrc Avg	Ask Price Average
AskQty Accum	Accumulated Ask Quantity
AskPrc	Ask Price
ThrshAsk ₍₆₎	Threshold Ask Price
AskQty	Ask Quantity
WrkSells ₍₂₎	Working Sells for entire Group ID
Ask Mbr ₍₁₎	Ask Member ID
NetPos	Net Position
FFNetPos	Fast Fill Net Position
LastPrc	Last Price
LastQty	Last Quantity
Total	Total Traded Quantity
High	High Price
Low	Low Price
Open	Opening Price
Close	Closing Price
Chng	Last Price-Last Close
TheoPrc	Theoretical Price
TheoBid	Theoretical Bid Price
TheoAsk	Theoretical Ask Price
QAct	Quote Action (Sends individual quotes)
BQQ	Test Bid Quote Quantity
BQP	Test Bid Quote Price
Mkt BQQ	Market Bid Quote Quantity
Mkt BQP	Market Bid Quote Price
Quote	Checkbox activates/deactivates contract for quoting
Mkt AQQ	Market Ask Quote Quantity
Mkt AQP	Market Ask Quote Price
AQP	Ask Quote Price
AQQ	Ask Quote Quantity
Imp BidQty ₍₅₎	Implied Bid Quantity
Imp BidPrc ₍₅₎	Implied Bid Price
Imp AskQty ₍₅₎	Implied Ask Quantity
Imp AskPrc ₍₅₎	Implied Ask Price
Gamma ₍₃₎	Change in Delta given 1 pt change in underlying
Delta ₍₃₎	Change in price given 1 pt change in underlying
Vola ₍₃₁₎	Percent volatility
Vega ₍₃₎	Price change given 1% change in Vola
Rho ₍₃₎	Price change given 1% change in interest rate
Theta ₍₃₎	Price change for every day that elapses
Click Trd	Activate/deactivate click trading by contract
S(Status)	Auction, Closed, FastMkt, Not Tradable, Pre-trading, Tradable, S = post-trading
Expiry	Expiration Month/Year

As described herein, the display and trading method of the present invention provide the user with certain advantages over systems in which a display of market depth, as shown in FIG. 2, is used. The Mercury display and trading method of the present invention ensure fast and accurate execution of trades by displaying market depth on a vertical or

horizontal plane, which fluctuates logically up or down, left or right across the plane as the market prices fluctuates. This allows the trader to trade quickly and efficiently. An example of such a Mercury display is illustrated in the screen display of FIG. 3.

The display of market depth and the manner in which traders trade within the market depth can be effected in different manners, which many traders will find materially better, faster and more accurate. In addition, some traders may find the display of market depth to be difficult to follow. In the display shown in FIG. 2, the market depth is displayed vertically so that both Bid and Ask prices descend the grid. The Bid prices descend the market grid as the prices decrease. Ask prices also descend the market grid as these prices actually increase. This combination may be considered counterintuitive and difficult to follow by some traders.

The Mercury display overcomes this problem in an innovative and logical manner. Mercury also provides an order entry system, market grid, fill window and summary of market orders in one simple window. Such a condensed display materially simplifies the trading system by entering and tracking trades in an extremely efficient manner. Mercury displays market depth in a logical, vertical fashion or horizontally or at some other convenient angle or configuration. A vertical field is shown in the figures and described for convenience, but the field could be horizontal or at an angle. In turn, Mercury further increases the speed of trading and the likelihood of entering orders at desired prices with desired quantities. In the preferred embodiment of the invention, the Mercury display is a static vertical column of prices with the bid and ask quantities displayed in vertical columns to the side of the price column and aligned with the corresponding bid and ask prices. An example of this display is shown in FIG. 3.

Bid quantities are in the column **1003** labeled BidQ and ask quantities are in column **1004** labeled AskQ. The representative ticks from prices for the given commodity are shown in column **1005**. The column does not list the whole prices (e.g. 95.89), but rather, just the last two digits (e.g. 89). In the example shown, the inside market, cells **1020**, is 18 (best bid quantity) at 89 (best bid price) and 20 (best ask quantity) at 90 (best ask price). In the preferred embodiment of the invention, these three columns are shown in different colors so that the trader can quickly distinguish between them.

The values in the price column are static; that is, they do not normally change positions unless a re-centering command is received (discussed in detail later). The values in the Bid and Ask columns however, are dynamic; that is, they move up and down (in the vertical example) to reflect the market depth for the given commodity. The LTQ column **1006** shows the last traded quantity of the commodity. The relative position of the quantity value with respect to the Price values reflects the price at which that quantity was traded. Column **1001** labeled E/W (entered/working) displays the current status of the trader's orders. The status of each order is displayed in the price row where it was entered. For example, in cells **1007**, the number next to S indicates the number of the trader's ordered lots that have been sold at the price in the specific row. The number next to W indicates the number of the trader's ordered lots that are in the market, but have not been filled—i.e. the system is working on filling the order. Blanks in this column indicate that no orders are entered or working at that price. In cells **1008**, the number next to B indicates the number of the trader's ordered lots that have been bought at the price in the specific row. The number next to W indicates the number of

the trader's ordered lots that are in the market, but have not been filled—i.e. the system is working on filling the order.

Various parameters are set and information is provided in column **1002**. For example, "10:48:44" in cell **1009** shows the actual time of day. The L and R fields in cell **1010** indicate a quantity value, which may be added to the order quantity entered. This process is explained below with respect to trading under Mercury. Below the L and R fields, in cell **1011**, a number appears which represents the current market volume. This is the number of lots that have been traded for the chosen contract. Cell **1012**, "X 10", displays the Net Quantity, the current position of the trader on the chosen contract. The number "10" represents the trader's buys minus sells. Cell **1013** is the "Current Quantity"; this field represents the quantity for the next order that the trader will send to market. This can be adjusted with right and left clicks (up and down) or by clicking the buttons which appear below the Current Quantity in cells **1014**. These buttons increase the current quantity by the indicated amount; for example, "10" will increase it by 10; "1H" will increase it by 100; "1K" will increase it by 1000. Cell **1015** is the Clear button; clicking this button will clear the Current Quantity field. Cell **1016** is the Quantity Description; this is a pull down menu allowing the trader to choose from three Quantity Descriptions. The pull down menu is displayed when the arrow button in the window is clicked. The window includes NetPos, Offset and a field allowing the trader to enter numbers. Placing a number in this field will set a default buy or sell quantity. Choosing "Offset" in this field will enable the L/R buttons of cell **1010**. Choosing "NetPos" in this field will set the current Net Quantity (trader's net position) as the trader's quantity for his next trade. Cell **1017** are +/- buttons; these buttons will alter the size of the screen—either larger (+) or smaller (-). Cell **1018** is used to invoke Net 0; clicking this button will reset the Net Quantity (cell **1011**) to zero. Cell **1019** is used to invoke Net Real; clicking this button will reset the Net Quantity (cell **1011**) to its actual position.

The inside market and market depth ascend and descend as prices in the market increase and decrease. For example, FIG. 4 shows a screen displaying the same market as that of FIG. 3 but at a later interval where the inside market, cells **1101**, has risen three ticks. Here, the inside market for the commodity is 43 (best bid quantity) at 92 (best bid price) and 63 (best ask quantity) at 93 (best ask price). In comparing FIGS. 3 and 4, it can be seen that the price column remained static, but the corresponding bids and asks rose up the price column. Market Depth similarly ascends and descends the price column, leaving a vertical history of the market.

As the market ascends or descends the price column, the inside market might go above or below the price column displayed on a trader's screen. Usually a trader will want to be able to see the inside market to assess future trades. The system of the present invention addresses this problem with a one click centering feature. With a single click at any point within the gray area, **1021**, below the "Net Real" button, the system will re-center the inside market on the trader's screen. Also, when using a three-button mouse, a click of the middle mouse button, irrespective of the location of the mouse pointer, will re-center the inside market on the trader's screen.

The same information and features can be displayed and enabled in a horizontal fashion. Just as the market ascends and descends the vertical Mercury display shown in FIGS. 3 and 4, the market will move left and right in the horizontal Mercury display. The same data and the same information gleaned from the dynamical display of the data is provided. It is envisioned that other orientations can be used to

dynamically display the data and such orientations are intended to come within the scope of the present invention.

Next, trading commodities, and specifically, the placement of trade orders using the Mercury display is described. Using the Mercury display and trading method, a trader would first designate the desired commodity and, if applicable, the default quantities. Then he can trade with single clicks of the right or left mouse button. The following equations are used by the system to generate trade orders and to determine the quantity and price to be associated with the trade order. The following abbreviations are used in these formulas: P=Price value of row clicked, R=Value in R field, L=Value in L field, Q=Current Quantity, Q_a =Total of all quantities in AskQ column at an equal or better price than P, Q_b =Total of all quantities in BidQ column at an equal or better price than P, N=Current Net Position, Bo=Buy order sent to market and So=Sell order sent to market.

Any order entered using right mouse button

$$Bo=(Q_a+R)P \quad (\text{Eq. 1})$$

If BidQ field clicked.

$$So=(Q_b+R)P \quad (\text{Eq. 2})$$

If AskQ field clicked.

Orders entered using the left mouse button

If "Offset" mode chosen in Quantity Description field then:

$$Bo=(Q_a+L)P \quad (\text{Eq. 3})$$

If BidQ field clicked.

$$So=(Q_b+L)P \quad (\text{Eq. 4})$$

If AskQ field clicked.

If "number" mode chosen in Quantity Description field then:

$$Bo=QP \quad (\text{Eq. 5})$$

$$So=QP \quad (\text{Eq. 6})$$

If "NetPos" mode chosen in Quantity Description field then:

$$Bo=NP \quad (\text{Eq. 7})$$

$$So=NP \quad (\text{Eq. 8})$$

Orders can also be sent to market for quantities that vary according to the quantities available in the market; quantities preset by the trader; and which mouse button the trader clicks. Using this feature, a trader can buy or sell all of the bids or asks in the market at or better than a chosen price with one click. The trader could also add or subtract a preset quantity from the quantities outstanding in the market. If the trader clicks in a trading cell—i.e. in the BidQ or AskQ column, he will enter an order in the market. The parameters of the order depend on which mouse button he clicks and what preset values he set.

Using the screen display and values from FIG. 5, the placement of trade orders using the Mercury display and trading method is now described using examples. A left click on the 18 in the BidQ column 1201 will send an order to market to sell 17 lots (quantity # chosen on the Quantity Description pull down menu cell 1204) of the commodity at a price of 89 (the corresponding price in the Prc column

1203). Similarly, a left click on the 20 in the AskQ column 1202 will send an order to market to buy 17 lots at a price of 90.

Using the right mouse button, an order would be sent to market at the price that corresponds to the row clicked for the total quantity of orders in the market that equal or better the price in that row plus the quantity in the R field 1205. Thus, a right click in the AskQ column 1202 in the 87 price row will send a sell order to market at a price of 87 and a quantity of 150. 150 is the sum of all the quantities 30, 97, 18 and 5. 30, 97 and 18 are all of the quantities in the market that would meet or better the trader's sell order price of 87. These quantities are displayed in the BidQ column 1201 because this column represents the orders outstanding in the market to purchase the commodity at each corresponding price. The quantity 5 is the quantity pre-set in the R field 1205.

Similarly, a right click in the BidQ column 1201 at the same price level of 87 would send a buy limit order to market for a quantity of 5 at a price of 87. The quantity is determined in the same manner as above. In this example, though, there are no orders in the market that equal or better the chosen price—there are no quantities in the AskQ column 1202 that equal or better this price. Therefore, the sum of the equal or better quantities is zero ("0"). The total order entered by the trader will be the value in the R field, which is 5.

An order entered with the left mouse button and the "Offset" option chosen in the quantity description field 1204 will be calculated in the same way as above, but the quantity in the L field 1206 will be added instead of the quantity in the R field 1205. Thus, a left click in the BidQ column 1201 in the 92 price row will send a buy order to market at a price of 92 and a quantity of 96. 96 is the sum of all the quantities 45, 28, 20 and 3. 45, 28 and 20 are all quantities in the market that would meet or better the trader's buy order price of 92. These quantities are displayed in the AskQ column 1202 because this column represents the orders outstanding in the market to sell the commodity at each corresponding price. The quantity 3 is the quantity pre-set in the L field 1206.

The values in the L or R fields may be negative numbers. This would effectively decrease the total quantity sent to market. In other words, in the example of a right click in the AskQ column 1202 in the 87 price row, if the R field was -5, the total quantity sent to market would be 140 (30+97+18+(-5)).

If a trader chose the "NetPos" option in the quantity description field 1204, a right click would still work as explained above. A left click would enter an order with a price corresponding to the price row clicked and a quantity equal to the current Net position of the trader. The Net position of the trader is the the trader's current position on the chosen contract. In other words, if the trader has bought 10 more contracts than he has sold, this value would be 10. NetPos would not affect the quantity of an order sent with a right click.

If the trader chose a number value in the quantity description, a left click would send an order to market for the current quantity chosen by the trader. The default value of the current quantity will be the number entered in the quantity description field, but it could be changed by adjusting the figure in the current quantity field 1204.

This embodiment of the invention also allows a trader to delete all of his working trades with a single click of either the right or left mouse button anywhere in the last traded quantity (LTQ) column 1207. This allows a trader to exit the

market immediately. Traders will use this feature when they are losing money and want to stop the losses from pilling up. Traders may also use this feature to quickly exit the market upon making a desired profit. The invention also allows a trader to delete all of his orders from the market at a particular price level. A click with either mouse button in the Entered/Working (E/W) column **1208** will delete all working orders in the cell that was clicked. Thus, if a trader believes that previously sent orders at a particular price that have not been filled would be poor trades, he can delete these orders with a single click.

The process for placing trade orders using the Mercury display and trading method of the present invention as described above is shown in the flowchart of FIG. 6. First, in step **1301**, the trader has the Mercury display on the trading terminal screen showing the market for a given commodity. In step **1302**, the parameters are set in the appropriate fields, such as the L and R fields and the Current Quantity, NetPos or Offset fields from the pull down menu. In step **1303**, the mouse pointer is positioned and clicked over a cell in the Mercury display by the trader. In step **1304**, the system determines whether the cell clicked is a tradeable cell (i.e. in the AskQ column or BidQ column). If not, then in step **1305**, no trade order is created or sent and, rather, other quantities are adjusted or functions are performed based upon the cell selected. Otherwise, in step **1306**, the system determines whether it was the left or the right button of the mouse that was clicked. If it was the right, then in step **1307**, the system will use the quantity in the R field when it determines the total quantity of the order in step **1310**. If the left button was clicked, then in step **1308**, the system determines which quantity description was chosen: Offset, NetPos or an actual number.

If Offset was chosen, then the system, in step **1309**, will use the quantity in the L field when it determines the total quantity of the order in step **1310**. If NetPos was chosen, then the system, in step **1312**, will determine that the total quantity for the trade order will be current NetPos value, i.e. the net position of the trader in the given commodity. If an actual number was used as the quantity description, then, in step **1311**, the system will determine that the total quantity for the trade order will be the current quantity entered. In step **1310**, the system will determine that the total quantity for the trade order will be the value of the R field (if step **1307** was taken) or the value of the L field (if step **1309** was taken) plus all quantities in the market for prices better than or equal to the price in the row clicked. This will add up the quantities for each order in the market that will fill the order being entered by the trader (plus the L or R value).

After either steps **1310**, **1311** or **1312**, the system, in step **1313**, determines which column was clicked, BidQ or AskQ. If AskQ was clicked, then, in step **1314**, the system sends a sell limit order to the market at the price corresponding to the row for the total quantity as already determined. If BidQ was clicked, then, in step **1315**, the system sends a buy limit order to the market at the price corresponding to the row for the total quantity as already determined.

It should be understood that the above description of the invention and specific examples, while indicating preferred embodiments of the present invention, are given by way of illustration and not limitation. Many changes and modifications within the scope of the present invention may be made without departing from the spirit thereof, and the present invention includes all such changes and modifications.

We claim:

1. A method of placing a trade order for a commodity on an electronic exchange having an inside market with a highest bid price and a lowest ask price, using a graphical user interface and a user input device, said method comprising:

setting a preset parameter for the trade order

displaying market depth of the commodity, through a dynamic display of a plurality of bids and a plurality of asks in the market for the commodity, including at least a portion of the bid and ask quantities of the commodity, the dynamic display being aligned with a static display of prices corresponding thereto, wherein the static display of prices does not move in response to a change in the inside market;

displaying an order entry region aligned with the static display prices comprising a plurality of areas for receiving commands from the user input devices to send trade orders, each area corresponding to a price of the static display of prices; and

selecting a particular area in the order entry region through single action of the user input device with a pointer of the user input device positioned over the particular area to set a plurality of additional parameters for the trade order and send the trade order to the electronic exchange.

2. A method of placing a trade order according to claim **1**, wherein said trade order is a buy order if the position of the pointer at the time of said single action is within a bid order entry region and wherein said trade order is a sell order if the position of the pointer at the time of said single action is within an ask order entry region.

3. A method of placing a trade order according to claim **2**, wherein the trade order is for a pre-determined fixed quantity and for a price corresponding to the position of the pointer at the time of said single action.

4. A method of placing a trade order according to claim **2**, wherein the trade order is for a quantity equal to a current net position of the user in the commodity and for a price corresponding to the position of the pointer at the time of said single action.

5. A method of placing a trade order according to claim **2**, wherein the trade order is for a quantity equal to a pre-determined fixed offset plus the sum of all quantities in the market at prices better than or equal to a price corresponding to the position of the pointer at the time of said single action and for a price corresponding to said position.

6. A method of placing a trade order according to claim **2**, wherein said offset is equal to a first pre-determined value if a single action of a first type is taken and said offset is equal to a second pre-determined value if a single action of a second type is taken.

7. A method of placing a trade order according to claim **2**, further comprising canceling said trade order in response to a subsequent single action of the user input device.

8. A computer readable medium having program code recorded thereon, for execution on a computer having a graphical user interface and a user input device, to place a trade order for a commodity on an electronic exchange having an inside market with a highest bid price and a lowest ask price, comprising:

a first program code for setting a preset parameter for the trade order;

a second program code displaying market depth of a commodity, through a dynamic display of a plurality of bids and a plurality of asks in the market for the

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commodity, including the bid and ask quantities of the commodity, aligned with a static display of prices corresponding thereto, wherein the static display of prices does not move in response to a change in the inside market;

a third program code for displaying an order entry region comprising a plurality of areas for receiving commands from the user input device to send trade orders, aligned with the static display of prices, each area corresponding to a price of the static display of prices; and

a fourth program code for receiving a command as a result of a selection of a particular area in the order entry region by a single action of the user input device with a pointer of the user input device positioned over the particular area, to set a plurality of additional parameters for the trade order and send the trade order to the electronic exchange.

9. A computer readable medium having program code recorded thereon, for execution on a computer to place a trade order according to claim 8, further comprising program code for establishing that said trade order is a buy order if the position of the pointer at the time of said single action is within a bid order entry region and that said trade order is a sell order if the position of the pointer at the time of said single action is within an ask order entry region.

10. A computer readable medium having program code recorded thereon, for execution on a computer to place a trade order according to claim 9, further comprising program code for establishing that the trade order is for a pre-determined fixed quantity and for a price corresponding to the position of the pointer at the time of said single action.

11. A computer readable medium having program code recorded thereon, for execution on a computer to place a trade order according to claim 9, further comprising program code for establishing that the trade order is for a quantity equal to a current net position of the user in the commodity and for a price corresponding to the position of the pointer at the time of said single action.

12. A computer readable medium having program code recorded thereon, for execution on a computer to place a trade order according to claim 9, further comprising program code for establishing that the trade order is for a quantity equal to a pre-determined fixed offset plus the sum of all quantities in the market at prices better than or equal to a price corresponding to the position of the pointer at the time of said single action and for a price corresponding to said position.

13. A computer readable medium having program code recorded thereon, for execution on a computer to place a trade order according to claim 12, further comprising program code for establishing that said offset is equal to a first pre-determined value if a single action of a first type is taken and said offset is equal to a second pre-determined value if a single action of a second type is taken.

14. A client system for placing a trade order for a commodity on an electronic exchange having an inside market with a highest bid price and a lowest ask price, the system comprising:

a parameter setting component for setting a preset parameter for the trade order;

a display device for displaying market depth of a commodity, through a dynamic display of a plurality of bids and a plurality of asks in the market for the commodity, including the bid and ask quantities of the commodity, aligned with a static display of prices corresponding thereto, wherein the static display of prices does not move when the inside market changes,

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and for displaying an order entry region aligned with the static display of prices, comprising a plurality of areas for receiving commands to send trade orders, each area corresponding to a price of the static display of prices;

a user input device for positioning a pointer thereof over an area in the order entry region; and

a trade order sending component for receiving a command as a result of a selection of the area in the order entry region by a single action of the user input device with a pointer of the user input device positioned over the area, to set a plurality of additional parameters for the trade order and send the trade order to the electronic exchange.

15. A client system for placing a trade order for a commodity according to claim 14, wherein said trade order sending component establishes that said trade order is a buy order if the position of the pointer at the time of said single action is within a bid order entry region and that said trade order is a sell order if the position of the pointer at the time of said single action is within an ask order entry region.

16. A client system for placing a trade order for a commodity according to claim 15, wherein said trade order sending component establishes that the trade order is for a pre-determined fixed quantity and for a price corresponding to the position of the pointer at the time of said single action.

17. A client system for placing a trade order for a commodity according to claim 15, wherein said trade order sending component establishes that the trade order is for a quantity equal to a current net position of the user in the commodity and for a price corresponding to the position of the pointer at the time of said single action.

18. A client system for placing a trade order for a commodity according to claim 15, wherein said trade order sending component establishes that the trade order is for a quantity equal to a predetermined fixed offset plus the sum of all quantities in the market at prices better than or equal to a price corresponding to the position of the pointer at the time of said single action and for a price corresponding to said position.

19. A client system for placing a trade order for a commodity according to claim 18, wherein said trade order sending component establishes that said offset is equal to a first pre-determined value if a single action of a first type is taken and said offset is equal to a second predetermined value if a single action of a second type is taken.

20. A method according to claim 1, wherein said displaying the market depth of a commodity traded in a market further comprises displaying said bids and asks in a vertical orientation.

21. A method according to claim 1, wherein said displaying the market depth of a commodity traded in a market further comprises displaying said bids and asks in a horizontal orientation.

22. A method according to claim 1, wherein a plurality of said displayed bids and asks in the market include bid and ask quantities of the commodity.

23. A method according to claim 1, wherein said displaying the market depth of a commodity traded in a market further comprises displaying said bids and asks in different colors.

24. A method according to claim 1, further comprising re-centering said prices corresponding to the bids and asks about an inside market price upon receipt of a re-centering instruction.

25. A method according to claim 1, further comprising dynamically displaying working orders in alignment with the prices corresponding thereto.

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26. A method of displaying according to claim 1, further comprising dynamically displaying entered orders in alignment with the prices corresponding thereto, wherein said entered orders indicate a quantity of said commodity for which a trader's orders have been filled at said corresponding prices.

27. A method according to claim 1, wherein said displaying the market depth of a commodity traded in a market further comprises displaying said statically displayed prices in at least one direction in numerical order.

28. A method according to claim 1, wherein said displaying the market depth of a commodity traded in a market further comprises displaying said statically displayed prices along a single line in numerical order.

29. A method of displaying according to claim 1, wherein said displaying the market depth of a commodity traded in a market further comprises dynamically displaying a last traded quantity for said commodity in alignment with the price corresponding thereto.

30. A computer readable medium according to claim 8, further comprising program code to ensure that said displayed bids, asks and prices are oriented vertically.

31. A computer readable medium according to claim 8, further comprising program code to ensure that said displayed bids, asks and prices are oriented horizontally.

32. A computer readable medium according to claim 8, further comprising program code to ensure that a plurality of bids and asks in the market include bid and ask quantities of the commodity.

33. A computer readable medium according to claim 8, further comprising program code to ensure that bids and asks are displayed in different colors.

34. A computer readable medium according to claim 8, further comprising program code to ensure that said displayed prices corresponding to the bids and asks are re-centered about an inside market price upon receipt of a re-centering instruction.

35. A computer readable medium according to claim 8, further comprising program code for dynamically displaying working orders in alignment with the prices corresponding thereto.

36. A computer readable medium according to claim 8, further comprising program code for dynamically displaying entered orders in alignment with the prices corresponding thereto, wherein said entered orders indicate a quantity of said commodity for which a trader's orders have been filled at said corresponding prices.

37. A computer readable medium according to claim 8, further comprising program code to ensure that said statically displayed prices are displayed in at least one direction in numerical order.

38. A computer readable medium according to claim 8, further comprising program code to ensure that said statically displayed prices are displayed along a single line in numerical order.

39. A computer readable medium according to claim 8, further comprising program code for dynamically displaying a last traded quantity for said commodity in alignment with the price corresponding thereto.

40. A client system according to claim 14, wherein said displays are oriented vertically.

41. A client system according to claim 14, wherein said displays are oriented horizontally.

42. A client system according to claim 14, wherein said displays of the pluralities of bids and asks in the market include bid and ask quantities of the commodity.

43. A client system according to claim 14, wherein said displays are displayed in different colors.

44. A client system according to claim 14, wherein said display of prices corresponding to the bids and asks is re-centered about an inside market price upon re-centering instruction from a user.

45. A client system according to claim 14, further comprising a display of working orders displayed in alignment with the prices corresponding thereto.

46. A client system according to claim 14, wherein said display device displays entered orders in alignment with the prices corresponding thereto and wherein said entered orders indicate a quantity of said commodity for which a trader's orders have been filled at said corresponding prices.

47. A client system according to claim 14, wherein said static display of prices is displayed in at least one direction in numerical order.

48. A client system according to claim 14, wherein said static display of prices is displayed along a single line in numerical order.

49. A client system according to claim 14, wherein said display device displays a last traded quantity for said commodity in alignment with the price corresponding thereto.

50. The method of claim 2, wherein the bid order entry region overlaps with a bid display region and the ask order entry region overlaps with an ask display region.

51. A computer readable medium having program code recorded thereon, for execution on a computer to place a trade order according to claim 9, wherein the bid order entry region overlaps with a bid display region and the ask order entry region overlaps with an ask display region.

52. A client system for placing a trade order for a commodity according to claim 15, wherein the bid order entry region overlaps with a bid display region and the ask order entry region overlaps with an ask display region.

53. The method of claim 1 wherein the market depth is based on an exchange order book and wherein the static display of prices does not move in response to the addition of a price to the exchange order book, the additional price comprising a displayed price.

54. The method of claim 53 wherein the static display of prices does not move in response to the removal of a price from the exchange order book, the removed price comprising a displayed price.

55. The method of claim 1 wherein the market depth is based on an exchange order book and the static display of prices never moves in response to a price change in the exchange order book relating to a price which is displayed.

56. The method of claim 1 wherein the plurality of additional parameters comprises a price and type of order.

* * * * *

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,772,132 B1
DATED : August 3, 2004
INVENTOR(S) : Gary Allan Kemp II, Jens-Uwe Schluetter and Harris Brumfield

Page 1 of 1

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Title page,

Item [56], **References Cited**, OTHER PUBLICATIONS, after the last entry, insert -- Patsystems News Release, PATSYSTEMS LAUNCHES J TRADER, November 06, 2001 --.

Column 9,

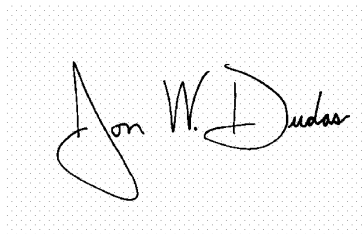
Line 65, delete "sell" and insert -- buy --.

Column 10,

Line 2, delete "buy" and insert -- sell --.

Signed and Sealed this

Second Day of August, 2005

A handwritten signature in black ink on a light gray dotted background. The signature reads "Jon W. Dudas" in a cursive style.

JON W. DUDAS
Director of the United States Patent and Trademark Office



US006772132C1

(12) **EX PARTE REEXAMINATION CERTIFICATE (6740th)**
United States Patent
Kemp, II et al. (10) **Number: US 6,772,132 C1**
(45) **Certificate Issued: Mar. 31, 2009**

(54) **CLICK BASED TRADING WITH INTUITIVE GRID DISPLAY OF MARKET DEPTH**

2003/0097325 A1 5/2003 Friesen et al.

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(75) Inventors: **Gary Allan Kemp, II**, Winnetka, IL (US); **Jens-Uwe Schluetter**, Evanston, IL (US); **Harris Brumfield**, Chicago, IL (US)

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(73) Assignee: **Trading Technologies International, Inc.**, Evanston, IL (US)

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No. 90/008,576, May 25, 2007

Reexamination Certificate for:

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 Issued: **Aug. 3, 2004**
 Appl. No.: **09/590,692**
 Filed: **Jun. 9, 2000**

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(51) **Int. Cl.**
G06Q 40/00 (2006.01)
G06F 3/048 (2006.01)

(52) **U.S. Cl.** **705/36 R; 705/35; 705/10; 705/14; 715/814**

(58) **Field of Classification Search** None
See application file for complete search history.

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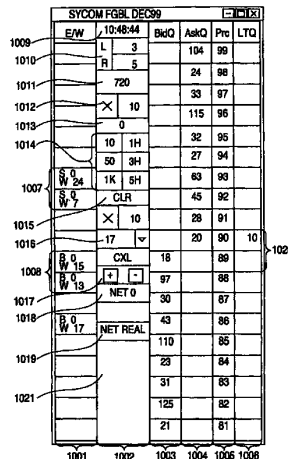
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Primary Examiner—Jeanne M. Clark

(57) **ABSTRACT**

A method and system for reducing the time it takes for a trader to place a trade when electronically trading on an exchange, thus increasing the likelihood that the trader will have orders filled at desirable prices and quantities. The "Mercury" display and trading method of the present invention ensure fast and accurate execution of trades by displaying market depth on a vertical or horizontal plane, which fluctuates logically up or down, left or right across the plane as the market prices fluctuates. This allows the trader to trade quickly and efficiently.



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EX PARTE
REEXAMINATION CERTIFICATE
ISSUED UNDER 35 U.S.C. 307

NO AMENDMENTS HAVE BEEN MADE TO
THE PATENT

2
AS A RESULT OF REEXAMINATION, IT HAS BEEN
DETERMINED THAT:

5 The patentability of claims 1-56 is confirmed.

* * * * *

Exhibit 3



US006766304B2

(12) **United States Patent**
Kemp, II et al.

(10) **Patent No.:** **US 6,766,304 B2**
(45) **Date of Patent:** **Jul. 20, 2004**

(54) **CLICK BASED TRADING WITH INTUITIVE GRID DISPLAY OF MARKET DEPTH**

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5,793,301 A 8/1998 Patterson, Jr. et al.

(75) Inventors: **Gary Allan Kemp, II**, Winnetka, IL (US); **Jens-Uwe Schluetter**, Evanston, IL (US); **Harris Brumfield**, Chicago, IL (US)

(List continued on next page.)

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(73) Assignee: **Trading Technologies International, Inc.**, Chicago, IL (US)

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(52) **U.S. Cl.** **705/37; 705/36; 705/35**

(58) **Field of Search** **705/35, 36, 37; 345/814**

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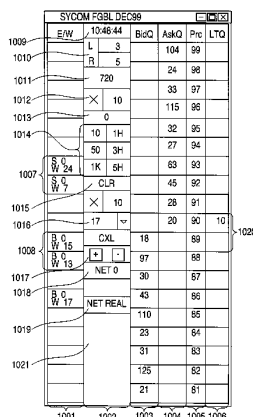
Primary Examiner—Richard Weisberger

(74) *Attorney, Agent, or Firm*—Foley & Lardner

(57) **ABSTRACT**

A method and system for reducing the time it takes for a trader to place a trade when electronically trading on an exchange, thus increasing the likelihood that the trader will have orders filled at desirable prices and quantities. The "Mercury" display and trading method of the present invention ensure fast and accurate execution of trades by displaying market depth on a vertical or horizontal plane, which fluctuates logically up or down, left or right across the plane as the market prices fluctuates. This allows the trader to trade quickly and efficiently.

40 Claims, 6 Drawing Sheets



US 6,766,304 B2

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FIG. 1

CONNECTION TO MULTIPLE EXCHANGES

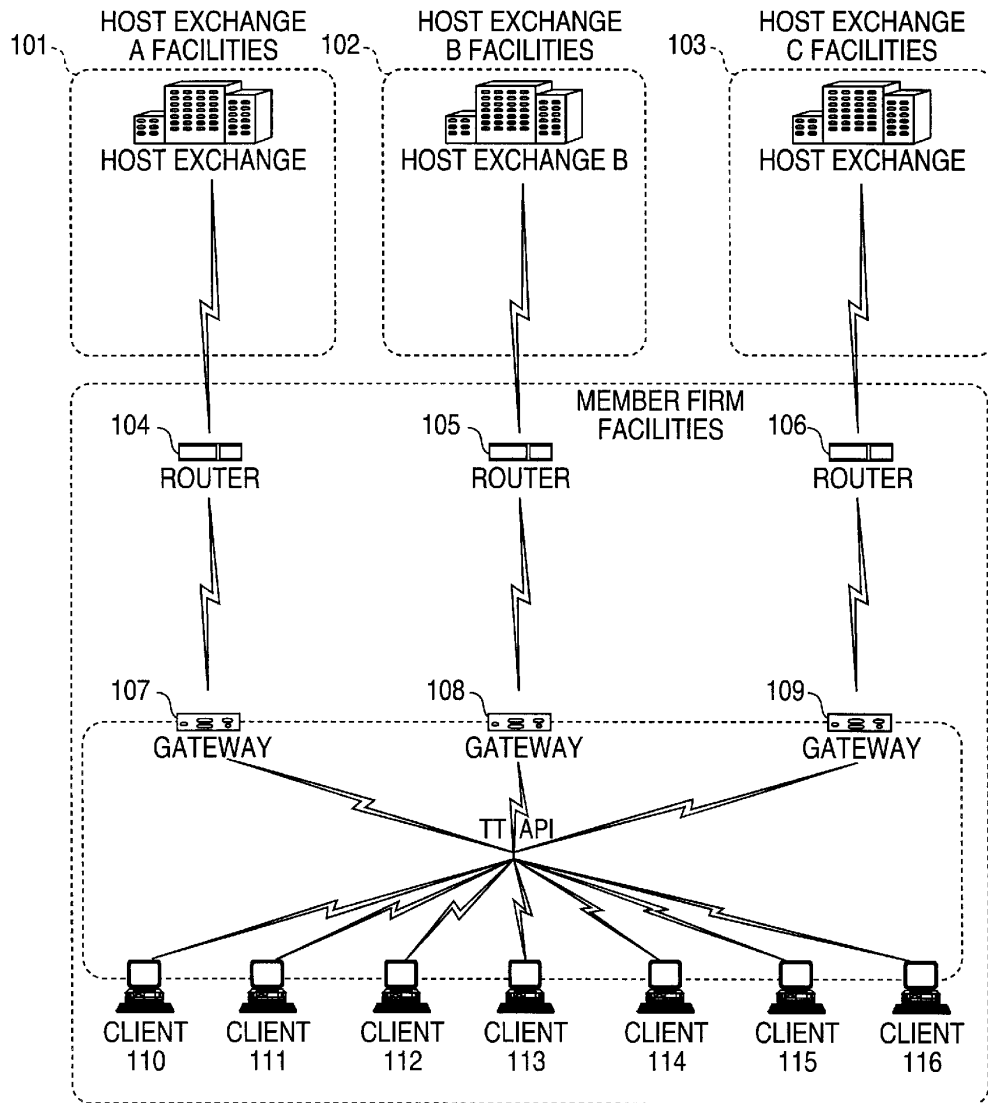


FIG. 2

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

FIG. 3

SYCOM FGBL DEC99							-	□	×
E/W	10:48:44		BidQ	AskQ	Prc	LTQ			
1009	L	3		104	99				
1010	R	5		24	98				
1011	720			33	97				
1012	×	10		115	96				
1013	0			32	95				
1014	10	1H		27	94				
	50	3H		63	93				
1007	S 0 W 24	1K 5H		45	92				
	S 0 W 7	CLR		28	91				
1015	×	10		20	90	10	1020		
1016	17	▽		18	89				
1008	B 0 W 15	CXL	18		89				
	B 0 W 13	+ -	97		88				
1017	NET 0		30		87				
1018	B 0 W 17	NET REAL	43		86				
1019			110		85				
			23		84				
			31		83				
1021			125		82				
			21		81				

FIG. 4

SYCOM FGBL DEC99						[-] [] [X]	
E/W	10:48:44		BidQ	AskQ	Prc	LTQ	
	L	3		104	99		
	R	5		24	98		
	720			33	97		
	X	10		115	96		
	0			32	95		
	10	1H		27	94		
	50	3H		63	93	10	} 1101
S 10 W 14	1K	5H	43		92		
	CLR		125		91		
	X	10	97		90		
	17	▼	18		89		
B 0 W 15	CXL		97		88		
B 0 W 13	+	-	30		87		
	NET 0		43		86		
B 0 W 17	NET REAL		110		85		
			23		84		
			31		83		
			125		82		
			21		81		

FIG. 5

SYCOM FGBL DEC99					
E/W	10:48:44	BidQ	AskQ	Prc	LTQ
	L 3		104	99	
	R 5		24	98	
	720		33	97	
	X 10		115	96	
	0		32	95	
	10 1H		27	94	
	50 3H		63	93	
S 0 W 24	1K 5H		45	92	
S 0 W 7	CLR		28	91	
	X 10		20	90	10
	17 ▾		18	89	
B 0 W 15	CXL	97		88	
B 0 W 13	+ -	30		87	
	NET 0	43		86	
B 0 W 17	NET REAL	110		85	
		23		84	
		31		83	
		125		82	
		21		81	

1206

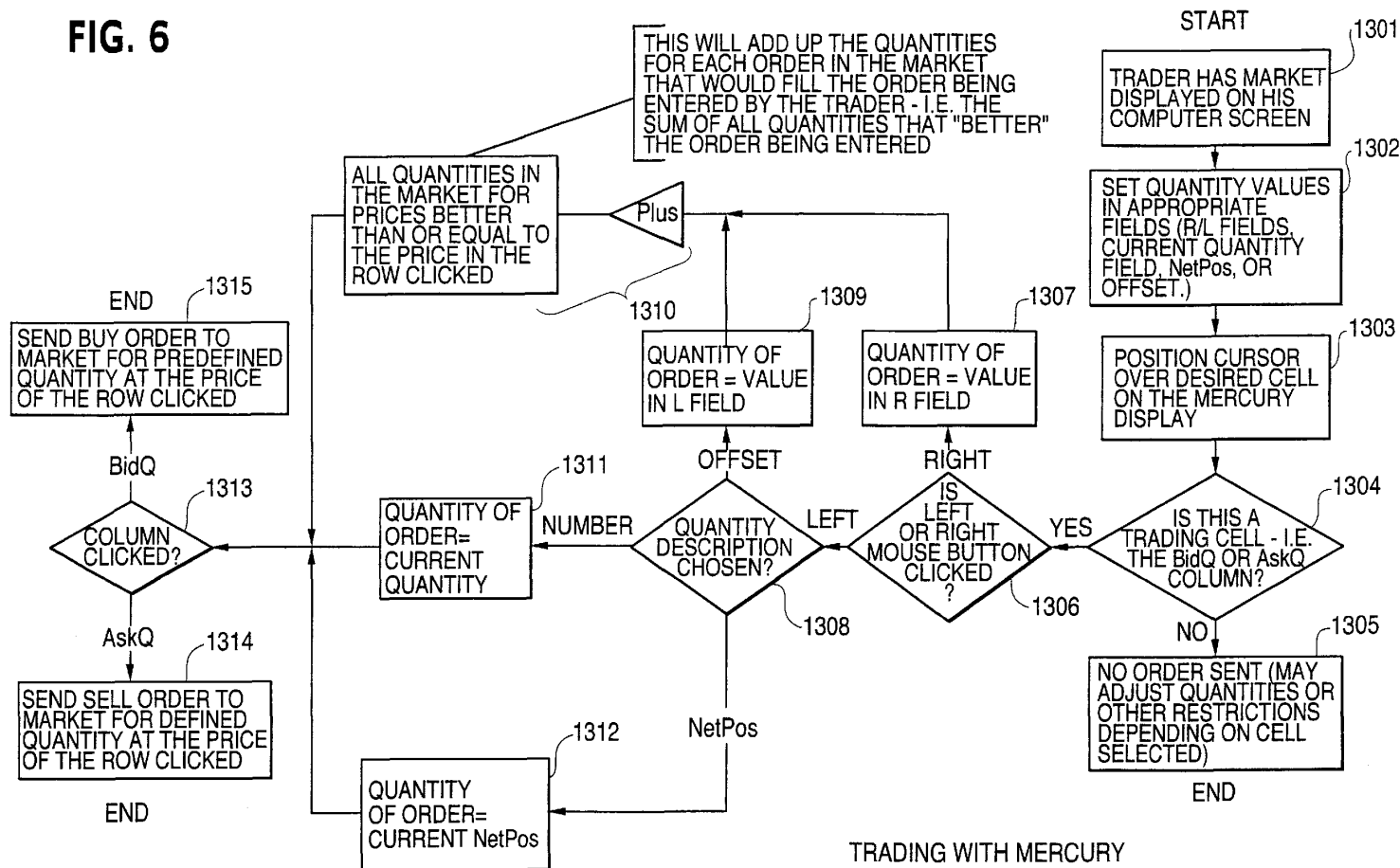
1205

1204

1208

1201 1202 1203 1207

FIG. 6



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**CLICK BASED TRADING WITH INTUITIVE
GRID DISPLAY OF MARKET DEPTH**

This application is a divisional application of Ser. No. 09/590,692 filed Jun. 09, 2000 which claims benefit of 5 60/186,322, filed Mar. 2, 2000.

PRIORITY

The present application claims priority to a U.S. Provisional Patent Application entitled "Market Depth Display Click Based Trading and Mercury Display" filed Mar. 2, 2000, the contents of which are incorporated herein by reference. 10

FIELD OF INVENTION

The present invention is directed to the electronic trading of commodities. Specifically, the invention provides a trader with a versatile and efficient tool for executing trades. It facilitates the display of and the rapid placement of trade orders within the market trading depth of a commodity, where a commodity includes anything that can be traded with quantities and/or prices. 20

BACKGROUND OF THE INVENTION

At least 60 exchanges throughout the world utilize electronic trading in varying degrees to trade stocks, bonds, futures, options and other products. These electronic exchanges are based on three components: mainframe computers (host), communications servers, and the exchange participants' computers (client). The host forms the electronic heart of the fully computerized electronic trading system. The system's operations cover order-matching, maintaining order books and positions, price information, and managing and updating the database for the online trading day as well as nightly batch runs. The host is also equipped with external interfaces that maintain uninterrupted online contact to quote vendors and other price information systems. 25

Traders can link to the host through three types of structures: high speed data lines, high speed communications servers and the Internet. High speed data lines establish direct connections between the client and the host. Another connection can be established by configuring high speed networks or communications servers at strategic access points worldwide in locations where traders physically are located. Data is transmitted in both directions between traders and exchanges via dedicated high speed communication lines. Most exchange participants install two lines between the exchange and the client site or between the communication server and the client site as a safety measure against potential failures. An exchange's internal computer system is also often installed with backups as a redundant measure to secure system availability. The third connection utilizes the Internet. Here, the exchange and the traders communicate back and forth through high speed data lines, which are connected to the Internet. This allows traders to be located anywhere they can establish a connection to the Internet. 30

Irrespective of the way in which a connection is established, the exchange participants' computers allow traders to participate in the market. They use software that creates specialized interactive trading screens on the traders' desktops. The trading screens enable traders to enter and execute orders, obtain market quotes, and monitor positions. The range and quality of features available to traders on their 35

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screens varies according to the specific software application being run. The installation of open interfaces in the development of an exchange's electronic strategy means users can choose, depending on their trading style and internal requirements, the means by which they will access the exchange. 40

The world's stock, bond, futures and options exchanges have volatile products with prices that move rapidly. To profit in these markets, traders must be able to react quickly. A skilled trader with the quickest software, the fastest communications, and the most sophisticated analytics can significantly improve his own or his firm's bottom line. The slightest speed advantage can generate significant returns in a fast moving market. In today's securities markets, a trader lacking a technologically advanced interface is at a severe competitive disadvantage. 45

Irrespective of what interface a trader uses to enter orders in the market, each market supplies and requires the same information to and from every trader. The bids and asks in the market make up the market data and everyone logged on to trade can receive this information if the exchange provides it. Similarly, every exchange requires that certain information be included in each order. For example, traders must supply information like the name of the commodity, quantity, restrictions, price and multiple other variables. Without all of this information, the market will not accept the order. This input and output of information the same for every trader. 50

With these variables being constant, a competitive speed advantage must come from other aspects of the trading cycle. When analyzing the time it takes to place a trade order for a given commodity, various steps contribute in different amounts to the total time required. Approximately 8% of the total time it takes to enter an order elapses between the moment the host generates the price for the commodity and the moment the client receives the price. The time it takes for the client application to display the price to the trader amounts to approximately 4%. The time it takes for a trade order to be transmitted to the host amounts to approximately 8%. The remainder of the total time it takes to place an order, approximately 80%, is attributable to the time required for the trader to read the prices displayed and to enter a trade order. The present invention provides a significant advantage during the slowest portion of the trading cycle—while the trader manually enters his order. Traders recognize that the value of time savings in this portion may amount to millions of dollars annually. 55

In existing systems, multiple elements of an order must be entered prior to an order being sent to market, which is time consuming for the trader. Such elements include the commodity symbol, the desired price, the quantity and whether a buy or a sell order is desired. The more time a trader takes entering an order, the more likely the price on which he wanted to bid or offer will change or not be available in the market. The market is fluid as many traders are sending orders to the market simultaneously. In fact, successful markets strive to have such a high volume of trading that any trader who wishes to enter an order will find a match and have the order filled quickly, if not immediately. In such liquid markets, the prices of the commodities fluctuate rapidly. On a trading screen, this results in rapid changes in the price and quantity fields within the market grid. If a trader intends to enter an order at a particular price, but misses the price because the market prices moved before he could enter the order, he may lose hundreds, thousands, even millions of dollars. The faster a trader can trade, the less likely it will be that he will miss his price and the more likely he will make money. 60

SUMMARY OF THE INVENTION

The inventors have developed the present invention which overcomes the drawbacks of the existing trading systems and dramatically reduces the time it takes for a trader to place a trade when electronically trading on an exchange. This, in turn, increases the likelihood that the trader will have orders filled at desirable prices and quantities.

The "Mercury" display and trading method of the present invention ensure fast and accurate execution of trades by displaying market depth on a vertical or horizontal plane, which fluctuates logically up or down, left or right across the plane as the market prices fluctuates. This allows the trader to trade quickly and efficiently.

Specifically, the present invention is directed to a graphical user interface for displaying the market depth of a commodity traded in a market, including a dynamic display for a plurality of bids and for a plurality of asks in the market for the commodity and a static display of prices corresponding to the plurality of bids and asks. In this embodiment the pluralities of bids and asks are dynamically displayed in alignment with the prices corresponding thereto. Also described herein is a method and system for placing trade orders using such displays.

These embodiments, and others described in greater detail herein, provide the trader with improved efficiency and versatility in placing, and thus executing, trade orders for commodities in an electronic exchange. Other features and advantages of the present invention will become apparent to those skilled in the art from the following detailed description. It should be understood, however, that the detailed description and specific examples, while indicating preferred embodiments of the present invention, are given by way of illustration and not limitation. Many changes and modifications within the scope of the present invention may be made without departing from the spirit thereof, and the invention includes all such modifications.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 illustrates the network connections between multiple exchanges and client sites;

FIG. 2 illustrates screen display showing the inside market and the market depth of a given commodity being traded;

FIG. 3 illustrates the Mercury display of the present invention;

FIG. 4 illustrates the Mercury display at a later time showing the movement of values when compared to FIG. 3;

FIG. 5 illustrates a Mercury display with parameters set in order to exemplify the Mercury trading method; and

FIG. 6 is a flowchart illustrating the process for Mercury display and trading.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

As described with reference to the accompanying figures, the present invention provides a display and trading method to ensure fast and accurate execution of trades by displaying market depth on a vertical or horizontal plane, which fluctuates logically up or down, left or right across the plane as the market prices fluctuates. This allows the trader to place trade orders quickly and efficiently. A commodity's market depth is the current bid and ask prices and quantities in the market. The display and trading method of the invention increase the likelihood that the trader will be able to execute orders at desirable prices and quantities.

In the preferred embodiment, the present invention is implemented on a computer or electronic terminal. The computer is able to communicate either directly or indirectly (using intermediate devices) with the exchange to receive and transmit market, commodity, and trading order information. It is able to interact with the trader and to generate contents and characteristics of a trade order to be sent to the exchange. It is envisioned that the system of the present invention can be implemented on any existing or future terminal or device with the processing capability to perform the functions described herein. The scope of the present invention is not limited by the type of terminal or device used. Further, the specification refers to a single click of a mouse as a means for user input and interaction with the terminal display as an example of a single action of the user. While this describes a preferred mode of interaction, the scope of the present invention is not limited to the use of a mouse as the input device or to the click of a mouse button as the user's single action. Rather, any action by a user within a short period of time, whether comprising one or more clicks of a mouse button or other input device, is considered a single action of the user for the purposes of the present invention.

The system can be configured to allow for trading in a single or in multiple exchanges simultaneously. Connection of the system of the present invention with multiple exchanges is illustrated in FIG. 1. This figure shows multiple host exchanges **101-103** connected through routers **104-106** to gateways **107-109**. Multiple client terminals **110-116** for use as trading stations can then trade in the multiple exchanges through their connection to the gateways **107-109**. When the system is configured to receive data from multiple exchanges, then the preferred implementation is to translate the data from various exchanges into a simple format. This "translation" function is described below with reference to FIG. 1. An applications program interface ("TT API" as depicted in the figure) translates the incoming data formats from the different exchanges to a simple preferred data format. This translation function may be disposed anywhere in the network, for example, at the gateway server, at the individual workstations or at both. In addition, the storage at gateway servers and at the client workstations, and/or other external storage cache historical data such as order books which list the client's active orders in the market; that is, those orders that have neither been filled nor cancelled. Information from different exchanges can be displayed at one or in multiple windows at the client workstation. Accordingly, "while reference is made through the remainder of the specification to a single exchange to which a trading terminal is connected, the scope of the invention includes the ability to trade, in accordance with the trading methods described herein, in multiple exchanges using a single trading terminal.

The preferred embodiments of the present invention include the display of "Market Depth" and allow trader to view the market depth of a commodity and to execute trades within the market depth with a single click of a computer mouse button. Market Depth represents the order book with the current bid and ask prices and quantities in the market. In other words, Market Depth is each bid and ask that was entered into the market, subject to the limits noted below, in addition to the inside market. For a commodity being traded, the "inside market" is the highest bid price and the lowest ask price.

The exchange sends the price, order and fill information to each trader on the exchange. The present invention processes this information and maps it through simple

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algorithms and mapping tables to positions in a theoretical grid program or any other comparable mapping technique for mapping data to a screen. The physical mapping of such information to a screen grid can be done by any technique known to those skilled in the art. The present invention is not limited by the method used to map the data to the screen display.

How far into the market depth the present invention can display depends on how much of the market depth the exchange provides. Some exchanges supply an infinite market depth, while others provide no market depth or only a few orders away from the inside market. The user of the present invention can also chose how far into the market depth to display on his screen. FIG. 2 illustrates a screen display of an invention described in a commonly owned co-pending application entitled "Click Based Trading with Market Depth Display" Ser. No. 09/589,751, filed on Jun. 9, 2000, the contents of which are incorporated herein by reference. This display shows the inside market and the market depth of a given commodity being traded. Row 1 represents the "inside market" for the commodity being traded which is the best (highest) bid price and quantity and the best (lowest) ask price and quantity. Rows 2-5 represent the "market depth" for the commodity being traded. In the preferred embodiment of the present invention, the display of market depth (rows 2-5) lists the available next-best bids, in column 203, and asks, in column 204. The working bid and ask quantity for each price level is also displayed in columns 202 and 205 respectively (inside market-row 1). Prices and quantities for the inside market and market depth update dynamically on a real time basis as such information is relayed from the market.

In the screen display shown in FIG. 2, the commodity (contract) being traded is represented in row 1 by the character string "CDHO". The Depth column 208 will inform the trader of a status by displaying different colors. Yellow indicates that the program application is waiting for data. Red indicates that the Market Depth has failed to

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receive the data from the server and has "timed out." Green indicates that the data has just been updated. The other column headings in this and all of the other figures, are defined as follows. BidQty (Bid Quantity): the quantity for each working bid, BidPrc (Bid Price): the price for each working bid, AskPrc (Ask Price): the price for each working ask, AskQty (Ask Quantity): the quantity for each working ask, LastPrc (Last Price): the price for the last bid and ask that were matched in the market and LastQty (Last Quantity): the quantity added at the last price. Total represents the total quantity traded of the given commodity.

The configuration of the screen display itself informs the user in a more convenient and efficient manner than existing systems. Traders gain a significant advantage by seeing the market depth because they can see trends in the orders in the market. The market depth display shows the trader the interest the market has in a given commodity at different price levels. If a large amount of bids or asks are in the market near the trader's position, he may feel he should sell or buy before the inside market reaches the morass of orders. A lack of orders above or below the inside market might prompt a trader to enter orders near the inside market. Without seeing the market depth, no such strategies could be utilized. Having the dynamic market depth, including the bid and ask quantities and prices of a traded commodity aligned with and displayed below the current inside market of the commodity conveys the information to the user in a more intuitive and easily understandable manner. Trends in the trading of, the commodity and other relevant characteristics are more easily identifiable by the user through the use of the present invention.

Various abbreviations are used in the screen displays, and specifically, in the column headings of the screen displays reproduced herein. Some abbreviations have been discussed above. A list of common abbreviations and their meanings is provided in Table 1.

TABLE I

Abbreviations.			
COLUMN	DESCRIPTION	COLUMN	DESCRIPTION
Month	Expiration Month/Year	TheoBid	Theoretical Bid Price
Bid Mbr(1)	Bid Member ID	TheoAsk	Theoretical Ask Price
WrkBuys(2)	Working Buys for entire Group ID	Qact	Quote Action (Sends individual quotes)
BidQty	Bid Quantity	BQQ	Test Bid Quote Quantity
ThrshBid(6)	Threshold Bid Price	BQP	Test Bid Quote Price
BidPrc	Bid Price	Mkt BQQ	Market Bid Quote Quantity
Bid Qty Accum	Accumulated Bid Quantity	Mkt BQP	Market Bid Quote Price
BidPrc Avg	Bid Price Average	Quote	Checkbox activates/deactivates contract for quoting
AskPrc Avg	Ask Price Average	Mkt AQQ	Market Ask Quote Quantity
AskQty Accum	Accumulated Ask Quantity	Mkt AQP	Market Ask Quote Price
AskPrc	Ask Price	AQP	Ask Quote Price
ThrshAsk(6)	Threshold Ask Price	AQQ	Ask Quote Quantity
AskQty	Ask Quantity	Imp BidQty(5)	Implied Bid Quantity
WrkSells(2)	Working Sells for entire Group ID	Imp BidPrc(5)	Implied Bid Price
Ask Mbr(1)	Ask Member ID	Imp AskQty(5)	Implied Ask Quantity
NetPos	Net Position	Imp AskPrc(5)	Implied Ask Price
FFNetPos	Fast Fill Net Position	Gamma(3)	Change in Delta given 1 pt change in underlying
LastPrc	Last Price	Delta (3)	Change in price given 1 pt change in underlying
LastQty	Last Quantity	Vola (3)	Percent volatility
Total	Total Traded Quantity	Vega (3)	Price change given 1% change in Vola
High	High Price	Rhop (3)	Price change given 1% change in interest rate

TABLE I-continued

Abbreviations.			
COLUMN	DESCRIPTION	COLUMN	DESCRIPTION
Low	Low Price	Theta(3)	Price change for every day that elapses
Open	Opening Price	Click Trd	Activate/deactivate click trading by contract
Close	Closing Price	S (Status)	Auction, Closed, FastMkt, Not Tradable, Pre-trading, Tradable, S = post-trading
Chng TheoPrc	Last Price-Last Close Theoretical Price	Expiry	Expiration Month/Year

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As described herein, the display and trading method of the present invention provide the user with certain advantages over systems in which a display of market depth, as shown in FIG. 2, is used. The Mercury display and trading method of the present invention ensure fast and accurate execution of trades by displaying market depth on a vertical or horizontal plane, which fluctuates logically up or down, left or right across the plane as the market prices fluctuates. This allows the trader to trade quickly and efficiently. An example of such a Mercury display is illustrated in the screen display of FIG. 3.

The display of market depth and the manner in which traders trade within the market depth can be effected in different manners, which many traders will find materially better, faster and more accurate. In addition, some traders may find the display of market depth to be difficult to follow. In the display shown in FIG. 2, the market depth is displayed vertically so that both Bid and Ask prices descend the grid. The Bid prices descend the market grid as the prices decrease. Ask prices also descend the market grid as these prices actually increase. This combination may be considered counterintuitive and difficult to follow by some traders.

The Mercury display overcomes this problem in an innovative and logical manner. Mercury also provides an order entry system, market grid, fill window and summary of market orders in one simple window. Such a condensed display materially simplifies the trading system by entering and tracking trades in an extremely efficient manner. Mercury displays market depth in a logical, vertical fashion or horizontally or at some other convenient angle or configuration. A vertical field is shown in the figures and described for convenience, but the field could be horizontal or at an angle. In turn, Mercury further increases the speed of trading and the likelihood of entering orders at desired prices with desired quantities. In the preferred embodiment of the invention, the Mercury display is a static vertical column of prices with the bid and ask quantities displayed in vertical columns to the side of the price column and aligned with the corresponding bid and ask prices. An example of this display is shown in FIG. 3.

Bid quantities are in the column 1003 labeled BidQ and ask quantities are in column 1004 labeled AskQ. The representative ticks from prices for the given commodity are shown in column 1005. The column, does not list the whole prices (e.g. 95.89), but rather, just the last two digits (e.g. 89). In the example shown, the inside market, cells 1020, is 18 (best bid quantity) at 89 (best bid price) and 20 (best ask quantity) at 90 (best ask price). In the preferred embodiment of the invention, these three columns are shown in different colors so that the trader can quickly distinguish between them.

The values in the price column are static; that is, they do not normally change positions unless a re-centering command is received (discussed in detail later). The values in the

Bid and Ask columns however, are dynamic; that is, they move up and down (in the vertical example) to reflect the market depth for the given commodity. The LTQ column 1006 shows the last traded quantity of the commodity. The relative position of the quantity value with respect to the Price values reflects the price at which that quantity was traded. Column 1001 labeled E/W (entered/working) displays the current status of the trader's orders. The status of each order is displayed in the price row where it was entered. For example, in cells 1007, the number next to S indicates the number of the trader's ordered lots that have been sold at the price in the specific row. The number next to W indicates the number of the trader's ordered lots that are in the market, but have not been filled—i.e. the system is working on filling the order. Blanks in this column indicate that no orders are entered or working at that price. In cells 1008, the number next to B indicates the number of the trader's ordered lots that have been bought at the price in the specific row. The number next to W indicates the number of the trader's ordered lots that are in the market, but have not been filled—i.e. the system is working on filling the order.

Various parameters are set and information is provided in column 1002. For example, "10:48:44" in cell 1009 shows the actual time of day. The L and R fields in cell 1010 indicate a quantity value, which may be added to the order quantity entered. This process is explained below with respect to trading under Mercury. Below the L and R fields, in cell 1011, a number appears which represents the current market volume. This is the number of lots that have been traded for the chosen contract. Cell 1012, "X 10", displays the Net Quantity, the current position of the trader on the chosen contract. The number "10" represents the trader's buys minus sells. Cell 1013 is the "Current Quantity"; this field represents the quantity for the next order that the trader will send to market. This can be adjusted with right and left clicks (up and down) or by clicking the buttons which appear below the Current Quantity in cells 1014. These buttons increase the current quantity by the indicated amount; for example, "10" will increase it by 10; "1H" will increase it by 100; "1K" will increase it by 1000. Cell 1015 is the Clear button; clicking this button will clear the Current Quantity field. Cell 1016 is the Quantity Description; this is a pull down menu allowing the trader to choose from three Quantity Descriptions. The pull down menu is displayed when the arrow button in the window is clicked. The window includes NetPos, Offset and a field allowing the trader to enter numbers. Placing a number in this field will set a default buy or sell quantity. Choosing "Offset" in this field will enable the L/R buttons of cell 1010. Choosing "NetPos" in this field will set the current Net Quantity (trader's net position) as the trader's quantity for his next trade. Cell 1017 are +/- buttons; these buttons will alter the size of the screen—either larger (+) or smaller (-). Cell 1018 is used to invoke Net 0; clicking this button will reset the Net Quantity

(cell **1011**) to zero. Cell **1019** is used to invoke Net Real; clicking this button will reset the Net Quantity (cell **10 11**) to its actual position.

The inside market and market depth ascend and descend as prices in the market increase and decrease. For example, FIG. 4 shows a screen displaying the same market as that of FIG. 3 but at a later interval where the inside market, cells **1101**, has risen three ticks. Here, the inside market for the commodity is 43 (best bid quantity) at 92 (best bid price) and 63 (best ask quantity) at 93 (best ask price). In comparing FIGS. 3 and 4, it can be seen that the price column remained static, but the corresponding bids and asks rose up the price column. Market Depth similarly ascends, and descends the price column, leaving a vertical history of the market.

As the market ascends or descends the price column, the inside market, might go above or below the price column displayed on a trader's screen. Usually a trader will want to be able to see the inside market to assess future trades. The system of the present invention addresses this problem with a one click centering feature. With a single click at any point within the gray area, **1021**, below the "Net Real" button, the system will re-center the inside market on the trader's screen. Also, when using a three-button mouse, a click of the middle mouse button, irrespective of the location of the mouse pointer, will re-center the inside market on the trader's screen.

The same information and features can be displayed and enabled in a horizontal fashion. Just as -the market ascends and descends the vertical Mercury display shown in FIGS. 3 and 4, the market will move left and right in the horizontal Mercury display. The same data and the same information gleaned from the dynamical display of the data is provided. It is envisioned that other orientations can be used to dynamically display the data and such orientations are intended to come within the scope of the present invention.

Next, trading commodities, and specifically, the placement of trade orders using the Mercury display is described. Using the Mercury display and trading method, a trader would first designate the desired commodity and, if applicable, the default quantities. Then he can trade with single clicks of the right or left mouse button. The following equations are used by the system to generate trade orders and to determine the quantity and price to be associated with the trade order. The following abbreviations are used in these formulas: P=Price value of row clicked, R=Value in R field, L=Value in L field, Q=Current Quantity, Q_a=Total of all quantities in AskQ column at an equal or better price than P, Q_b=Total of all quantities in BidQ column at an equal or better price than P, N=Current Net Position, Bo=Buy order sent to market and So=Sell order—sent to market.

Apy order entered using right mouse button

$$Bo=(Q_a+R)P \tag{Eq. 1}$$

If BidQ field clicked.

$$So=(Q_b+R)P \tag{Eq. 2}$$

If AskQ field clicked.

Orders entered using the left mouse button

If "Offset" mode chosen in Quantity Description field then:

$$Bo=(Q_a+L)P \tag{Eq. 3}$$

If BidQ field clicked.

$$SO=(Q_b+L)P \tag{Eq. 4}$$

If AskQ field clicked.

If "number" mode chosen in Quantity Description field then:

$$Bo=QP \tag{Eq. 5}$$

$$So=QP \tag{Eq. 6}$$

If "NetPos" mode chosen in Quantity Description field then:

$$Bo=NP \tag{Eq. 7}$$

$$So=NP \tag{Eq. 8}$$

Orders can also be sent to market for quantities that vary according to the quantities available in the market; quantities preset by the trader; and which mouse button the trader clicks. Using this feature, a trader can buy or sell all of the bids or asks in the market at or better than a chosen price with one click. The trader could also add or subtract a preset quantity from the quantities outstanding in the market. If the trader clicks in a trading cell—i.e. in the BidQ or AskQ column, he will enter an order in the market. The parameters of the order depend on which mouse button he clicks and what preset values he set.

Using the screen display and values from FIG. 5, the placement of trade orders using the Mercury display and trading method is now described using examples. A left click on the 18 in the BidQ column **1201** will send an order to market to buy 17 lots (quantity #chosen on the Quantity Description pull down menu cell **1204**) of the commodity at a price of 89 (the corresponding price in the Prc column **1203**). Similarly, a left click on the 20 in the AskQ column **1202** will send an order to market to sell 17 lots at a price of 90.

Using the right mouse button, an order would be sent to market at the price that corresponds to the row clicked for the total quantity of orders in the market that equal or better the price in that row plus the quantity in the R field **1205**. Thus, a right click in the AskQ column **1202** in the 87 price row will send a sell order to market at a price of 87 and a quantity of 150. 150 is the sum of all the quantities 30, 97, 18 and 5. 30, 97 and 18 are all of the quantities in the market that would meet or better the trader's sell order price of 87. These quantities are displayed in the BidQ column **1201** because this column represents the orders outstanding in the market to purchase the commodity at each corresponding price. The quantity 5 is the quantity pre-set in the R field **1205**.

Similarly, a right click in the BidQ column **1201** at the same price level of 87 would send a buy limit order to market for a quantity of 5 at a price of 87. The quantity is determined in the game manner as above. In this example, though, there are no orders in the market that equal or better the chosen price—there are no quantities in the AskQ column **1202** that equal or better this price. Therefore, the sum of the equal or better quantities is zero ("0"). The total order entered by the trader will be the value in the R field, which is 5.

An order entered with the left mouse button and the "Offset" option chosen in the quantity description field **1204**

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will be calculated in the same way as above, but the quantity in the L field **1206** will be added instead of the quantity in the R field **1205**. Thus, a left click in the BidQ column **1201** in the 92 price row will send a buy order to market at a price of 92 and a quantity of 96. 96 is the sum of all the quantities 45, 28, 20 and 3. 45, 28 and 20 are all quantities in the market that would meet or better the trader's buy order price of 92. These quantities are displayed in the AskQ column **1202** because this column represents the orders outstanding in the market to sell the commodity at each corresponding price. The quantity 3 is the quantity pre-set in the L field **1206**.

The values in the L or R fields may be negative numbers. This would effectively decrease the total quantity sent to market. In other words, in the example of a right click in the AskQ column **1202** in the 87 price row, if the R field was -5, the total quantity sent to market would be 140 (30+97+18+(-5)).

If a trader chose the "NetPos" option in the quantity description field **1204**, a right click would still work as explained above. A left click would enter an order with a price corresponding to the price row clicked and a quantity equal to the current Net position of the trader. The Net position of the trader is the trader's current position on the chosen contract. In other words, if the trader has bought 10 more contracts than he has sold, this value would be 10. NetPos would not affect the quantity of an order sent with a right click.

If the trader chose a number value in the quantity description, a left click would send an order to market for the current quantity chosen by the trader. The default value of the current quantity will be the number entered in the quantity description field, but it could be changed by adjusting the figure in the current quantity field **1204**.

This embodiment of the invention also allows a trader to delete all of his working trades with a single click of either the right or left mouse button anywhere in the last traded quantity (LTQ) column **1207**. This allows a trader to exit the market immediately. Traders will use this feature when they are losing money and want to stop the losses from piling up. Traders may also use this feature to quickly exit the market upon making a desired profit. The invention also allows a trader to delete all of his orders from the market at a particular price level. A click with either mouse button in the Entered/Working (E/W) column **1208** will delete all working orders in the cell that was clicked. Thus, if a trader believes that previously sent orders at a particular price that have not been filled would be poor trades, he can delete these orders with a single click.

The process for placing trade orders using the Mercury display and trading method of the present invention as described above is shown in the flowchart of FIG. 6. First, in step **1301**, the trader has the Mercury display on the trading terminal screen showing the market for a given commodity. In step **1302**, the parameters are set in the appropriate fields, such as the L and R fields and the Current Quantity, NetPos or Offset fields from the pull down menu. In step **1303**, the mouse pointer is positioned and clicked over a cell in the Mercury display by the trader. In step **1304**, the system determines whether the cell clicked is a tradable cell (i.e. in the AskQ column or BidQ column). If not, then in step **1305**, no trade order is created or sent and, rather, other quantities are adjusted or functions are performed based upon the cell selected. Otherwise, in step **1306**, the system determines whether it was the left or the right button of the mouse that was clicked. If it was the right, then in step **1307**, the system will use the quantity in the R field when it

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determines the total quantity of the order in step **1310**. If the left button was clicked, then in step **1308**, the system determines which quantity description was chosen: Offset, NetPos or an actual number.

If Offset was chosen, then the system, in step **1309**, will use the quantity in the L field when it determines the total quantity of the order in step **1310**. If NetPos was chosen, then the system, in step **1312**, will determine that the total quantity for the trade order will be current NetPos value, i.e. the net position of the trader in the given commodity. If an actual number was used as the quantity description, then, in step **1311**, the system will determine that the total quantity for the trade order will be the current quantity entered. In step **1310**, the system will determine that the total quantity for the trade order will be the value of the R field (if step **1307** was taken) or the value of the L field (if step **1309** was taken) plus all quantities in the market for prices better than or equal to the price in the row clicked. This will add up the quantities for each order in, the market that will fill the order being entered by the trader (plus the L or R value).

After either steps **1310**, **1311** or **1312**, the system, in step **1313**, determines which column was clicked, BidQ or AskQ. If AskQ was clicked, then, in step **1314**, the system sends a sell limit order to the market at the price corresponding to the row for the total quantity as already determined. If BidQ was clicked, then, in-step **1315**, the system sends a buy limit order to the market at the price corresponding to the row for the total quantity as already determined.

It should be understood that the above description of the invention and specific examples, while indicating preferred embodiments of the present invention, are given by way of illustration and not limitation. Many changes and modifications within the scope of the present invention may be made without departing from the spirit thereof, and the present invention includes all such changes and modifications.

We claim:

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

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

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

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

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

in response to a selection of a particular location of the order entry region by a single action of a user input

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device, setting a plurality of parameters for a trade order relating to the commodity and sending the trade order to the electronic exchange.

2. The method of claim 1 wherein the bid and ask display regions and the order entry region comprise columns with a plurality of cells that are displayed as a grid such that the cells of each column are aligned.

3. The method of claim 1 wherein the bid and ask display regions and the order entry region are oriented vertically.

4. The method of claim 1 wherein the bid and ask display regions and the order entry region are oriented horizontally.

5. The method of claim 1 wherein one of the plurality of locations of bid display region comprises a blank region in which there is no first indicator displayed.

6. The method of claim 1 wherein one of the plurality of locations of the ask display region comprises a blank region in which there is no first indicator displayed.

7. The method of claim 1 comprising the step of displaying at least a portion of the common static price axis in a price display region.

8. The method of claim 7 wherein the bid display region, the ask display region, the order entry region and the price display region comprise columns with a plurality of cells that are displayed as a grid such that the cells of each column are aligned.

9. The method of claim 7 wherein the bid display region, the ask display region, the order entry region and the price display region are oriented vertically.

10. The method of claim 7 wherein the bid display region, the ask display region, the order entry region and the price display region are oriented horizontally.

11. The method of claim 1 further comprising the steps of: dynamically displaying a third indicator at one of the plurality of locations in the bid display region, the third indicator representing quantity associated with at least one order to buy the commodity at a price different than the highest bid price currently available in the market; and

dynamically displaying a fourth indicator at one of the plurality of locations in the ask display region, the fourth indicator representing quantity associated with at least one order to sell the commodity at a price different than the lowest ask price currently available in the market.

12. The method of claim 11 wherein a location of the plurality of locations of the bid display region comprises a blank region in which there is no first or third indicator displayed.

13. The method of claim 1 wherein a location of the plurality of locations of the ask display region comprises a blank region in which there is no second or fourth indicator displayed.

14. The method of claim 1 wherein the order entry region comprises:

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

an ask order entry region comprising a plurality of locations for receiving commands to send sell orders, each location corresponding to a price level along the common static price axis.

15. The method of claim 14 wherein the bid order entry region overlaps with the bid display region and the ask order entry region overlaps with the ask display region.

16. The method of claim 1 further comprising dynamically displaying an entered order indicator in association with the price levels arranged along the common static price axis.

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17. The method of claim 16 wherein the entered order indicator is displayed in an entered order region.

18. The method of claim 1 further comprising dynamically displaying a last trade indicator in association with the common static price axis.

19. The method of claim 18 wherein the last trade indicator is displayed in a last trade region.

20. The method of claim 1 further comprising the steps of: displaying the first indicator at a first location associated with a first price level on the common static price axis at a first time; and

displaying the first indicator at a second location associated with a different price level on the common static price axis at a second time subsequent to the first time.

21. The method of claim 1 further comprising the steps of: displaying the second indicator at a first location associated with a first price level on the common static price axis at a first time; and

displaying the second indicator at a second location associated with a different price level on the common static price axis at a second time subsequent to the first time.

22. The method of claim 1 further comprising the steps of: displaying the first indicator at a first location associated with a particular price level on the common static price axis; and

repositioning the common static price axis such that the first indicator is displayed at a second location associated with the particular price level on the common static price axis.

23. The method of claim 1 further comprising the steps of: displaying the second indicator at a first location associated with a particular price level on the common static price axis; and

repositioning the common static price axis such that the second indicator is displayed at a second location associated with the particular price level on the common static price axis.

24. The method of claim 1 wherein the bid and ask display regions are displayed in different colors.

25. The method of claim 1 wherein the first and second indicators are displayed in different colors.

26. The method of claim 1 wherein the bid and ask display regions are displayed in a window further comprising centering the display of the first and second indicators in the window upon receipt of a centering instruction.

27. A computer readable medium having program code recorded thereon for execution on a computer for displaying market information relating to and facilitating trading of a commodity being traded in an electronic exchange having an inside market with a highest bid price and a lowest ask price on a graphical user interface, the program code causing a machine to perform the following method steps:

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

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

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

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

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

28. The method of claim 11 wherein the first and third indicators are displayed in locations of the bid display region that are arranged along an axis which is parallel to the common static price axis.

29. The method of claim 11 wherein the second and fourth indicators are displayed in locations of the ask display region that are arranged along an axis which is parallel to the common static price axis.

30. The method of claim 11 comprising the steps of: displaying the first indicator at a first location associated with a first price level on the common static price axis at a first time; and

displaying the first indicator at a second location associated with a different price level on the common static price axis at a second time subsequent to the first time.

31. The method of claim 30 wherein the third and fourth indicators remain in the same location in the bid and ask display regions, respectively, before and after the first indicator is displayed at the second location.

32. The method of claim 31 wherein each location of the bid display region corresponds to a different price level along the common static price axis and each location of the ask display region corresponds to a different price level along the common static price.

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33. The method of claim 11 comprising the steps of: displaying the second indicator at a first location associated with a first price level on the common static price axis at a first time; and

displaying the second indicator at a second location associated with a different price level on the common static price axis at a second time subsequent to the first time.

34. The method of claim 33 wherein the third and fourth indicators remain in the same location in the bid and ask display regions, respectively, before and after the second indicator is displayed at the second location.

35. The method of claim 34 wherein each location of the bid display region corresponds to a different price level along the common static price axis and each location of the ask display region corresponds to a different price level along the common static price.

36. The method of claim 1 wherein the bid and ask display regions are displayed separately.

37. The method of claim 1 wherein the first and second indicators are based on an exchange order book and wherein the price levels along the common static price axis do not move in response to the addition of a price to the exchange order book, the additional price comprising a price for which there is a corresponding displayed location in at least one of the bid and ask display regions.

38. The method of claim 37 wherein the price levels along the common static price axis do not move in response to the removal of a price from the exchange order book, the removed price comprising a price for which there is a corresponding displayed location in at least one of the bid and ask display regions.

39. The method of claim 1 wherein the first and second indicators are based on an exchange order book and the price levels along the common static price axis never move in response to a price change in the exchange order book relating to a price which corresponds to a displayed location in at least one of the bid and ask display regions.

40. The method of claim 1 the plurality of parameters comprises a price and type of order.

* * * * *

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,766,304 B2

Page 1 of 1

DATED : July 20, 2004

INVENTOR(S) : Gary Allan Kemp II, Jens-Uwe Schluetter and Harris Brumfield

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Title page.

Item [56], **References Cited**, U.S. PATENT DOCUMENTS, add the following:

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FOREIGN PATENT DOCUMENTS, add the following:

-- WO WO 95/35005 9/1995 --

Column 14.

Line 64, the word "Static" should be -- static --.

Column 15.

Line 26, after "claim 11" add the word -- further --.

Column 16.

Line 1, after "claim 11" add the word -- further --.

Line 10, the word "an" should be -- and --.

Line 40, after "claim 1" add -- wherein --.

Signed and Sealed this

Sixteenth Day of November, 2004



JON W. DUDAS
Director of the United States Patent and Trademark Office



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(12) **EX PARTE REEXAMINATION CERTIFICATE** (6739th)

United States Patent

Kemp, II et al.

(10) **Number:** **US 6,766,304 C1**

(45) **Certificate Issued:** **Mar. 31, 2009**

(54) **CLICK BASED TRADING WITH INTUITIVE GRID DISPLAY OF MARKET DEPTH**

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(75) Inventors: **Gary Allan Kemp, II**, Winnetka, IL (US); **Jens-Uwe Schluetter**, Evanston, IL (US); **Harris Brumfield**, Chicago, IL (US)

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(73) Assignee: **Trading Technologies International, Inc.**, Evanston, IL (US)

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Related U.S. Application Data

(62) Division of application No. 09/590,692, filed on Jun. 9, 2000, now Pat. No. 6,772,132.

(60) Provisional application No. 60/186,322, filed on Mar. 2, 2000.

(51) **Int. Cl.**
G06Q 40/00 (2006.01)
G06F 3/048 (2006.01)

(Continued)

Primary Examiner—Jeanne M. Clark

(52) **U.S. Cl.** **705/36 R; 705/35; 715/814**

(57) **ABSTRACT**

(58) **Field of Classification Search** None
See application file for complete search history.

A method and system for reducing the time it takes for a trader to place a trade when electronically trading on an exchange, thus increasing the likelihood that the trader will have orders filled at desirable prices and quantities. The "Mercury" display and trading method of the present invention ensure fast and accurate execution of trades by displaying market depth on a vertical or horizontal plane, which fluctuates logically up or down, left or right across the plane as the market prices fluctuates. This allows the trader to trade quickly and efficiently.

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	E/W	1048.44	BkQ	AskQ	Prc	LTQ
1009	L	3		104	99	
1010	R	5		24	98	
1011		720		33	97	
1012	X	10		115	98	
1013		0		32	96	
1014		10 1H		27	94	
		50 3H		63	93	
1007	S 0 W 24	1K 3H		45	92	
	S 0 W 4	CLR		28	91	
1015	X	10		20	90	10
1016	-17			18	89	
	S 0 W 15	CXL		97	88	
1008	S 0 W 13	+ -		30	87	
1017		NET 0		43	86	
1018	S 0 W 17	NET REAL		110	85	
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- Trial testimony of Gerard Varjacques dated Sep. 28, 2007 with PTX 509–510 and PTX 513.
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- Deposition testimony of Barbara Wattiez dated Jun. 16, 2007 with DDX 719–723.
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US 6,766,304 C1

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NO AMENDMENTS HAVE BEEN MADE TO
THE PATENT

2
AS A RESULT OF REEXAMINATION, IT HAS BEEN
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5 The patentability of claims **1-40** is confirmed.

* * * * *

Exhibit 4

007 100322



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Form PTO-1625 (Rev. 6/99)

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PATENT APPLICATION



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U.S. P.T.O.
60/186322



03/02/00

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Date Entered or Counted

CONTENTS

Date Received or Mailed

Date Entered or Counted	CONTENTS	Date Received or Mailed
	1. Application papers.	
	2. Request for access	3/15/03
	3. Request for access	7/29/04
	4. Request for access	8-09-09
	5. Request for access	8-11-09
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Bib Data Sheet



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SERIAL NUMBER 60/186,322	FILING DATE 03/02/2000	CLASS -	GROUP ART UNIT -	ATTORNEY DOCKET NO. 024051/0105
APPLICANTS Gary Allan Kemp II, Winnetka, IL ; Jens-Uwe Schluetter, Evanston, IL ; Harris Brumfield, Chicago, IL ;				
** CONTINUING DATA *****				
** FOREIGN APPLICATIONS *****				
IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** SMALL ENTITY **				
** 04/25/2000				
Foreign Priority claimed 35 USC 119 (a-d) conditions met	<input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> Met after Allowance	STATE OR COUNTRY IL	SHEETS DRAWING -	TOTAL CLAIMS -
Verified and Acknowledged	Examiner's Signature _____ Initials _____			INDEPENDENT CLAIMS -
ADDRESS Foley & Lardner Washington Harbour Suite 500 3000 K Street N W Washington ,DC 20007-5109				
TITLE Market depth display click based trading and mercury display				
FILING FEE RECEIVED 75	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:	<input type="checkbox"/> All Fees <input type="checkbox"/> 1.16 Fees (Filing) <input type="checkbox"/> 1.17 Fees (Processing Ext. of time) <input type="checkbox"/> 1.18 Fees (Issue) <input type="checkbox"/> Other _____ <input type="checkbox"/> Credit		

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In re Application of KEMP II et al.	
Application Number 60/186322	Filed 3-2-00

Paper No. **5**

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United States Patent Application Publication No. _____, page _____, line _____
 United States Patent Number **6772132**, column **PP**, line _____ or
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US006772132B1

(12) **United States Patent**
Kemp, II et al.

(10) **Patent No.:** **US 6,772,132 B1**
(45) **Date of Patent:** **Aug. 3, 2004**

(54) **CLICK BASED TRADING WITH INTUITIVE GRID DISPLAY OF MARKET DEPTH**

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(75) **Inventors:** Gary Allan Kemp, II, Winnetka, IL (US); Jens-Uwe Schluetter, Evanston, IL (US); Harris Brumfield, Chicago, IL (US)

(List continued on next page.)

(73) **Assignee:** Trading Technologies International, Inc., Chicago, IL (US)

FOREIGN PATENT DOCUMENTS

(*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 245 days.

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WO	WO 01/22315		3/2001
WO	WO 01/88808		11/2001

(21) **Appl. No.:** 09/590,692

(22) **Filed:** Jun. 9, 2000

Related U.S. Application Data

(60) Provisional application No. 60/186,322, filed on Mar. 2, 2000.

OTHER PUBLICATIONS

(51) **Int. Cl.:** G06F 17/60

www.tradingtechnologies.com/products/xtrade_full.html (viewed May 22, 2001), <Jun. 9, 2000.*

(52) **U.S. Cl.:** 705/37; 705/35; 705/36; 705/37; 705/10; 705/14; 345/814

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(58) **Field of Search:** 705/35, 36, 37, 705/10, 14; 345/814

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Primary Examiner—Richard Weisberger
(74) *Attorney, Agent, or Firm*—Folcy & Lardner

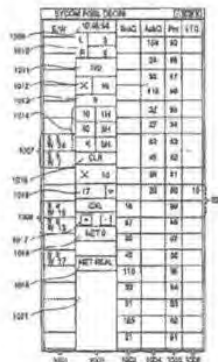
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(57) **ABSTRACT**

A method and system for reducing the time it takes for a trader to place a trade when electronically trading on an exchange, thus increasing the likelihood that the trader will have orders filled at desirable prices and quantities. The "Mercury" display and trading method of the present invention ensure fast and accurate execution of trades by displaying market depth on a vertical or horizontal plane, which fluctuates logically up or down, left or right across the plane as the market prices fluctuates. This allows the trader to trade quickly and efficiently.

56 Claims, 6 Drawing Sheets



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In re Application of <i>Kemp, Gary Allan</i>	
Application Number <i>60/186322</i>	Filed <i>Mar 2, 2000</i>
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: TRADING TECHNOLOGIES INTERNATIONAL, INC.
 Title: MARKET DEPTH DISPLAY CLICK BASED TRADING AND MERCURY DISPLAY
 Appl. No.: Unassigned
 Filing Date: March 2, 2000
 Examiner: Unassigned
 Art Unit: Unassigned



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Winnetka, IL

Jens-Uwe Schluetter
Evanston, IL

Harris Brumfield
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William T. Ellis
 Attorney for Applicant
 Registration No. 26,874

Applicant or Patentee: Trading Technologies International, Inc.
Serial or Patent No.: Atty. Dkt. No. 024051/0105
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For: MARKET DEPTH DISPLAY CLICK BASED TRADING AND MERCURY DISPLAY

VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY STATUS
(37 CFR 1.9(f) AND 1.27 (c)) - SMALL BUSINESS CONCERN

I hereby declare that I am
 the owner of the small business concern identified below:
 an official of the small business concern empowered to act on behalf of the concern identified below:

NAME OF CONCERN Trading Technologies International, Inc.
ADDRESS OF CONCERN 1603 Orrington Avenue, Suite 1300, Evanston, IL 60201

I hereby declare that the above-identified small business concern qualifies as a small business concern as defined in 13 CFR 121.3-18 and reproduced in 37 CFR 1.9(d), for purposes of paying reduced fees under section 41(a) and (b) of Title 35, United States Code, in that the number of employees of the concern, including those of its affiliates, does not exceed 500 persons. For purposes of this statement, (1) the number of employees of the business concern is the average over the previous fiscal year of the concern of the persons employed on a full-time, part-time or temporary basis during each of the pay periods of the fiscal year, and (2) concerns are affiliates of each other when either, directly or indirectly, one concern controls or has the power to control the other, or a third party or parties controls or has the power to control both.

I hereby declare that rights under contract or law have been conveyed to and remain with the small business concern identified above with regard to the invention, entitled MARKET DEPTH DISPLAY CLICK BASED TRADING AND MERCURY DISPLAY by inventor(s) Garv Allan Kemp II; Jens-Uwe Schlueter; Harris Brumfield described in

the specification filed herewith
 application serial no. _____, filed _____
 patent no. _____, issued _____

If the rights held by the above-identified small business concern are not exclusive, each individual, concern or organization having rights to the invention is listed below* and no rights to the invention are held by any person, other than the inventor, who would not qualify as an independent inventor under 37 CFR 1.9(c) if that person made the invention, or by any concern which would not qualify as a small business concern under 37 CFR 1.9(d) or a nonprofit organization under 37 CFR 1.9(e). * NOTE: Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities: (37 CFR 1.27)

NAME: _____
ADDRESS: _____
 INDIVIDUAL SMALL BUSINESS CONCERN NONPROFIT CORPORATION

NAME: _____
ADDRESS: _____
 INDIVIDUAL SMALL BUSINESS CONCERN NONPROFIT CORPORATION

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate: (37 CFR 1.28(b)).

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

NAME OF PERSON SIGNING: Michael J. Ryan
TITLE OF PERSON OTHER THAN OWNER: Vice General Counsel, Trading Technologies International, Inc.
ADDRESS OF PERSON SIGNING: 1811 WEST WAINWRIGHT, UNITED CHICAGO, IL
SIGNATURE: Michael J. Ryan DATE: 3/2/00

Market Depth Display and Click Based Trading

I. Introduction & Background

A. Introduction

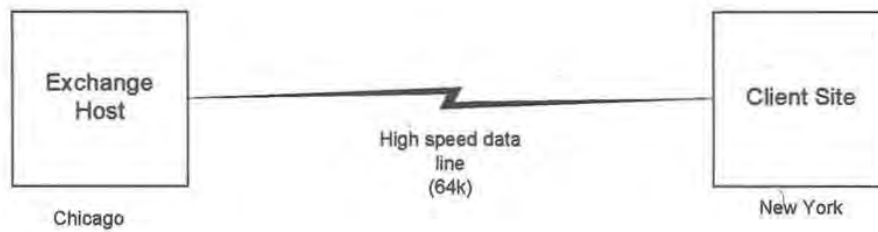
Trading Technologies has developed software that will enable traders of any product that can be traded (a "commodity") on an electronic exchange or electronic marketplace to send orders with a single click of a computer mouse. Three of the most innovative features of Trading Technologies' trading method are the "Click" and "Dime" trading methods and the "Mercury" display and trading method. Click and Dime trading methods enable a trader to execute single click trades for large volumes of commodities at a price within a pre-specified range. The Mercury display and trading method ensure fast and accurate execution of trades by displaying market depth on a vertical plane, which fluctuates logically up or down as the market price moves up or down. A trader can trade quickly and efficiently using this display. This document sets forth the background of electronic trading and describes Trading Technologies' innovative Click and Dime trading and the Mercury display.

B. Background of Electronic Exchanges and Traders' Needs in Electronic Exchanges

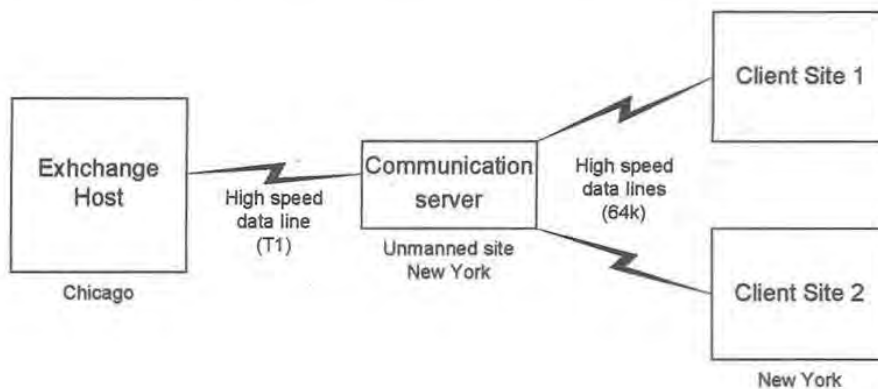
Approximately 60 exchanges throughout the world utilize electronic trading in varying degrees to trade stocks, bonds, futures, options and other products. These electronic exchanges are based on three components: mainframe computers (host), communications servers, and the exchange participants' computers (client). The host forms the electronic heart of the fully computerized electronic trading system. The system's operations cover order-matching, maintaining order books and positions, price information, and managing and updating the database for the online trading day as well as nightly batch runs. The host is also equipped with external interfaces that maintain uninterrupted online contact to quote vendors and other price information systems.

Traders can link to the host through three types of structures: high speed data lines, high speed communications servers and the internet. High speed data lines establish direct connections between the client and the host. For example, while the data line size and speed may vary, a high speed data line connection between a Chicago exchange and a New York trader might be configured like this:

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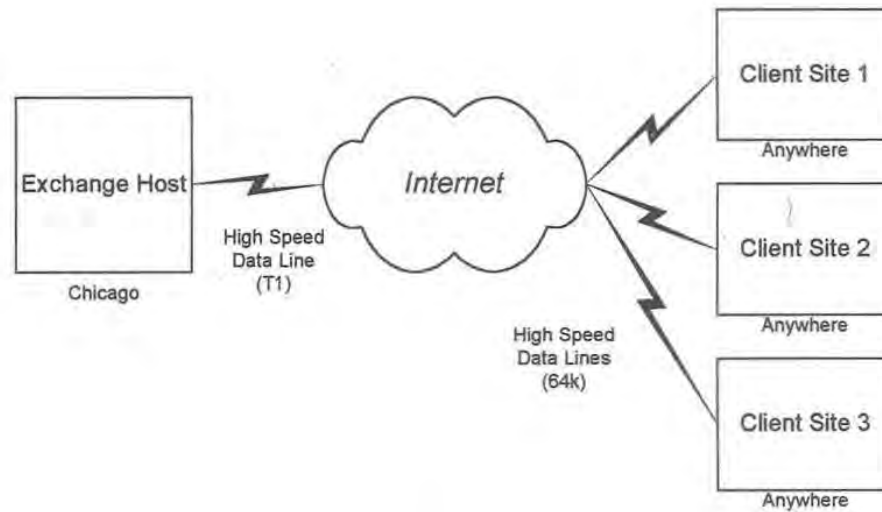


Another connection can be established by configuring high speed networks or communications servers at strategic access points worldwide in locations where traders physically are located. Data is transmitted in both directions between traders and exchanges via dedicated high speed communication lines. Such a connection between a Chicago exchange and multiple New York traders might be configured as follows:



Most exchange participants install two lines between the exchange and the client site or between the communication server and the client site as a safety measure against potential failures. An exchange's internal computer system is also often installed with backups as a redundant measure to secure system availability.

The third connection utilizes the internet. Here, the exchange and the traders communicate back and forth through high speed data lines, which are connected to the internet. This allows traders to be located anywhere they can establish a connection to the internet. Such a connection might be configured as follows:



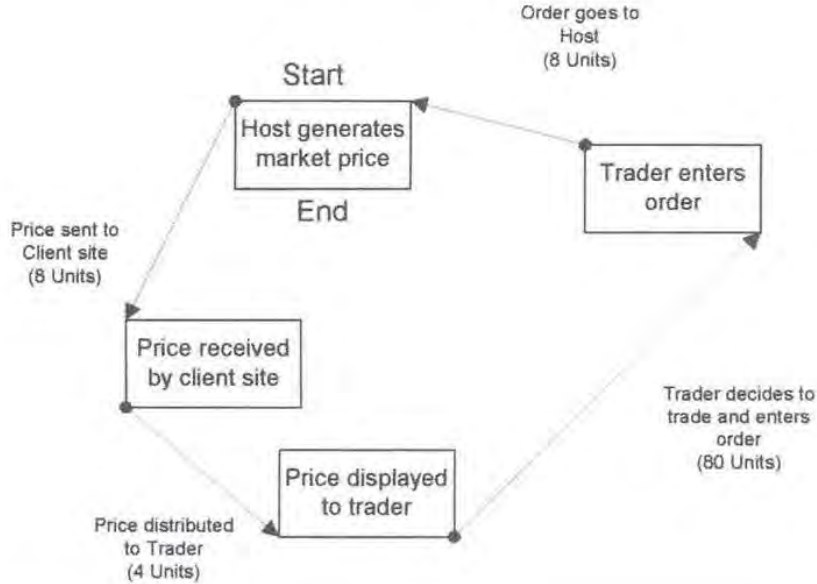
Regardless of the way in which a connection is established, the exchange participants' computers allow traders to participate in the market. They use software that creates specialized interactive trading screens on the traders' desktops. The trading screens enable traders to enter and execute orders, obtain market quotes, and monitor positions. The range and quality of features available to traders on their screens varies according to the specific software application being run. The installation of open interfaces in the development of an exchange's electronic strategy means users can choose, depending on their trading style and internal requirements, the means by which they will access the exchange.

C. Importance of Speed for Traders

The world's stock, bond, futures and options exchanges have volatile products with prices that move rapidly. To profit in these markets, traders must be able to react quickly. A skilled trader with the quickest software, the fastest communications, and the most sophisticated analytics can significantly improve his own or his firm's bottom line. The slightest speed advantage can generate significant returns in a fast moving market. In today's securities markets, a trader lacking a technologically advanced interface is at a severe competitive disadvantage.

Regardless of what screen a trader uses to enter orders in the market, each market supplies and requires the same information to and from every trader. The bids and asks in the market make up the market data and everyone logged on to trade can receive this information if the exchange provides it. Similarly, every exchange requires that certain information be included in each order. For example, traders must supply information like the name of the commodity, quantity, restrictions, price and multiple other variables. Without all of this information, the market will not accept the order. This input and output of information is the same for every trader.

Concept of time value
Entire continuum = 100 Units



The Mercury Display, Click and Dime trading simplify the manual motion involved, which results in significant time savings. Traders recognize that the value of such time savings may amount to millions of dollars annually.

D. The Trading Technologies solution

One screen, many exchanges

Trading Technologies provides a comprehensive, turnkey solution to trading electronic markets. Trading Technologies' flagship product, the X_TRADER® Trading System, provides a single, advanced front-end design to trade multiple exchanges from one screen with single click trading and quoting with a complete range of execution tools. The screen can be displayed on a computer screen in many, customizable formats. For example, the following screen shot shows the most basic X_TRADER® screen, which displays the commodity being traded, the "inside market," and various trade execution buttons:



By default, both the Order Entry window and Market Grid open when a product is selected. The following key describes each field in the above screen.

Order Entry Window:



Quantity Buttons: The pre-set buttons in the upper left corner of the screen allow traders to quickly enter and increment a quantity. The quantity defaults are 1, 5, 10, 100, and 500. Traders may edit these buttons to reflect customized quantities. The Clear button located below the Quantity buttons can be used to clear the Quantity field.



Quantity/Price Fields: The order quantity appears immediately to the right of the Quantity buttons; the price field appears to the right of that. Each field has its own spinners-- the up and down arrows. Click on the spinners to increase and decrease the quantity and/or price.



Order Information: This field will automatically reflect the contract information provided when a trader left clicks on any row in the Market Grid. Information like quantity, price, product, month/year, and order restriction type will be displayed. This field will also display a "C" for call or "P" for put.

GTD/GTC/Date Button: Located immediately to the right of the price field, a trader would click this button to toggle between GTD (Good 'til Day), GTC (Good 'til Cancelled), and Date. The default selection is GTD. The X_TRADER GTD designation indicates the order will be valid for the current trading session only. The GTC designation indicates the order will be valid until the trader cancels the order or the

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contract expires. The Date designation allows a trader to select an order expiration date. Selecting Date will open a calendar with the current date circled in red. The trader would select the expiration month and day for the order and press OK.

Limit (Market) Button: The trader would click this button, located to the right of the GTC button, to toggle between Limit (default) and Market orders.

Order Restrictions: Located to the right of the Limit button, a trader would click the Order Restrictions pull down menu to designate any restrictions on the order. Available restrictions include: None, DiscQty, FOK, IOC, MV, and STOP.

None: No additional restrictions are placed on the order.

DiscQty: Disclose Quantity—disguise trading volume by disclosing a partial amount of total quantity. When selected quantity box will open on the Order Entry window.

FOK: Fill or Kill—defined as an immediate fill of the entire quantity or if this is not possible, an immediate cancellation of the order.

IOC: Immediate or Cancel—defined as an immediate partial fill before the balance is cancelled.

MV: Minimum Volume—defined as the minimum volume of partial fills. The default is zero. The minimum volume is entered on the Order Entry window. When this restriction is chosen, a field labeled Min Vol will appear. The trader would then enter the minimum volume quantity, and place the order.

STOP: The Stop order price triggers a market buy or sell order. When the STOP restriction is chosen, a field labeled Stop Prc will appear. The trader would then enter the trigger price, and place the order. A stop order is displayed in the Order Book with a “Working” status, but it is not actually in the market. A negative order number (-###) is displayed indicating that it is a “synthetic” order. When the stop triggers, the order becomes the native order type and remains in the Order Book until filled.

If the trader who originated the order is not logged in when the order is triggered, the order will be sent to market with the trader ID of another trader with the same Group ID. If another trader is not available, the order status will change from “Working” to “Hold” until the order is resubmitted by the original trader or a trader with the same Group ID.

Open/Close: Located to the right of the Order Restrictions button, this pull down menu allows the trader to choose an Open Position or Close Position. This enables a trader to send an order at the open or close of the market.

Acct: A trader can select one of the following account types (A1 is selected in the above example):

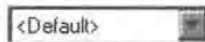
- A1 First Agent Account (e.g., broker)
- G1 Pre-Designated Giveup Trade
- G2 Designated Giveup Trade
- M1 First Market Maker Account

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- M2 Second Market Maker Account
- P1 First Principal Account (e.g., proprietary trader)
- P2 Second Principal Account
- U1 Unallocated—for orders that have not been allocated to a customer account or where allocation is a middle/back office function.

Cross With **Cross With:** A trader would click the Cross With button to trade with a specific counter party. The trader would enter the counter party's Trader ID where indicated.

Cross **Cross:** The trader would click the Cross button to perform a cross trade. The Order Entry pane will change to display the appropriate fields to perform a cross trade—including **BUYER** and **SELLER** drop lists of customer accounts. In addition, the **BUY** and **SELL** buttons will be replaced by **BUY FIRST** and **SELL FIRST** buttons.



Customer Selection Field: The Order Entry window Customer Selection drop list is located below the GTD and Limit buttons. This field displays the current customer defaults profile in use.



Buy and Sell Buttons: Traders click these buttons to send an order to market.



Lock: When the Lock box is checked, a buy or sell confirmation is requested before sending an order to market. After pressing the buy or sell button, the appropriate button title will change to **Apply Buy** or **Apply Sell**. A trader would click the appropriate button to confirm the order and send the order to market. To cancel the order (prior to sending it to the market), a trader would click the Clear button.



Clear: The Clear button located to the right of the Lock check box and below the order type information will clear all contract, price, and quantity data without sending the order to market. Note: the Quantity Clear button is located below the quantity buttons. This button will change the Quantity to zero without impacting the other fields.

The Market Grid:

The market grid appears as follows:

Month	BidQty	BidPrc	AskPrc	AskQty	WksSells	LastPrc	LastQty	Total	Expiry
JUL 99	750	39.80	40.15	3110		40.15	80	3000	JUL 99

The market grid can display price, quantity, the month of expiration and a long list of other information. The Bid and Ask quantities and prices in the above market grid represent the "Inside Market," which is the best bid and ask quantities and prices in the

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market. The figures are displayed dynamically in real time and are provided directly from the exchange on which the trader is trading. Not all exchanges provide data for all of the available market grid columns, but to the extent the market provides the information, each column of the Market Grid can be customized to include or exclude any of the following fields:

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COLUMN	DESCRIPTION	COLUMN	DESCRIPTION
Month	Expiration Month/Year	TheoBid	Theoretical Bid Price
Bid Mbr(1)	Bid Member ID	TheoAsk	Theoretical Ask Price
WrkBuys(2)	Working Buys for entire Group ID	QAct	Quote Action (Sends individual quotes)
BidQty	Bid Quantity	BQQ	Test Bid Quote Quantity
ThrshBid(6)	Threshold Bid Price	BQP	Test Bid Quote Price
BidPrc	Bid Price	Mkt BQQ	Market Bid Quote Quantity
Bid Qty Accum	Accumulated Bid Quantity	Mkt BQP	Market Bid Quote Price
BidPrc Avg	Bid Price Average	Quote	Checkbox activates / deactivates contract for quoting
AskPrc Avg	Ask Price Average	Mkt AQQ	Market Ask Quote Quantity
AskQty Accum	Accumulated Ask Quantity	Mkt AQP	Market Ask Quote Price
AskPrc	Ask Price	AQP	Ask Quote Price
ThrshAsk(6)	Threshold Ask Price	AQQ	Ask Quote Quantity
AskQty	Ask Quantity	Imp BidQty(5)	Implied Bid Quantity
WrkSells(2)	Working Sells for entire Group ID	Imp BidPrc(5)	Implied Bid Price
Ask Mbr(1)	Ask Member ID	Imp AskQty(5)	Implied Ask Quantity
NetPos	Net Position	Imp AskPrc(5)	Implied Ask Price
FFNetPos	Fast Fill Net Position	Gamma(3)	Change in Delta given 1 pt change in underlying
LastPrc	Last Price	Delta(3)	Change in price given 1 pt change in underlying
LastQty	Last Quantity	Vola(3)	Percent volatility
Total	Total Traded Quantity	Vega(3)	Price change given 1% change in Vola
High	High Price	Rho(3)	Price change given 1% change in interest rate
Low	Low Price	Theta(3)	Price change for every day that elapses
Open	Opening Price	Click Trd	Activate / deactivate click trading by contract
Close	Closing Price	S (Status)	Auction, Closed, FastMkt, Not Tradable, Pre-trading, Tradable, S = post-trading
Chng	Last Price-Last Close	Expiry	Expiration Month/Year
TheoPrc	Theoretical Price		

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¹ If supplied by the exchange/marketplace

² WrkBuys and WrkSells reflect the total number of working contracts for your entire group across all prices. Group ID from exchange login: e.g., AAAAABBB001--AAAAA represents Member ID, BBB represents Group ID, and 001 represents Trader ID. One or more traders may be assigned the same Group ID.

³ Options Theoretical Pricing Model (Theo Server) data categories

⁴ When the Click Trd check box is deselected (blank), click trading is disabled for that strike/expiry. If click trading is attempted for this contract, the Audit Trail will display and error message.

⁵ For options there are two sets of these columns (put and call sides). Use of these columns is exchange dependent. LIFFE supports implied pricing with the exception of strategies. Calculate implied prices for strategies using Excel.

⁶ Threshold prices for MATIF and MONEP are the upper and lower price reasonability limits established by the exchange. If trading occurs outside the thresholds, the exchange will cease trading for the product. A frozen market requires manual release by the exchange.

For purposes of this patent, it is important to understand the following Market Grid data elements or fields:

BidQty (Bid Quantity): This column displays the quantity for each working bid.

BidPrc (Bid Price): This column displays the price for each working bid.

AskPrc (Ask Price): This column displays the quantity for each working ask.

AskQty (Ask Quantity): This column displays the price for each working ask.

LastPrc (Last Price): This column displays the price for the last bid and ask that were matched in the market.

Order entry without Click and Dime trading

When using an electronic trading system, traders typically execute a trade with the above screen or one similar to it. To enter an order, the trader inputs the desired commodity, quantity, price, any order restriction and then clicks on the "buy" or "sell" button. Electronic exchanges require this type of information to be submitted before an order will be accepted.

Using the simplest window in X_TRADER®, the trader would position the cursor with his mouse and click on the appropriate fields. To select the quantity, the trader would move the cursor to the upper left quadrant of the screen and click the 1, 5, 10, 100 or 500 or click the up or down arrows, which border the quantity field (the white field above showing "0") until the appropriate quantity appeared. Second, the trader would enter the price he is willing to accept or pay by clicking the up or down arrows, which border the price field (the white field above showing "40.15"). Third, the trader would implement any order restrictions by clicking the GTD (good 'til day), GTC (good 'til cancel), Limit, or other order restriction on the pull down menu next to the Limit button. Fourth, the

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trader would select the appropriate account on the pull down menu to the right of the order restriction field. Finally, the trader would click the buy or sell button to send the order to market. A trader using any other trading screen would execute the same or similar actions.

The requirement of having to set multiple elements of an order, as described above, prior to an order being sent to market, is obviously time consuming for the trader. The more time a trader takes entering an order, the more likely the price he wanted to bid on will change or not be available in the market. The market is fluid as many traders are sending orders to the market simultaneously. In fact, successful markets strive to have such a high volume of trading that any trader who wishes to enter an order will find a match and have the order filled quickly, if not immediately. In such liquid markets, the prices of the commodities fluctuate rapidly. On a trading screen, this results in rapid changes in the price and quantity fields within the market grid. If a trader intends to enter an order at a particular price, but misses the price because the market prices moved before he could enter the order, he may lose hundreds, thousands, even millions of dollars. The faster a trader can trade, the less likely he'll miss his price and the more likely he will make money.

II. The Inventions

Trading Technologies' inventions dramatically reduce the time it takes a trader to manually execute a trade when electronically trading on an exchange. As a result, a trader's chances of filling orders at desirable prices and quantities increase.

A. Market Depth

- *INNOVATION #1: DISPLAY OF MARKET DEPTH HORIZONTALLY UNDER THE INSIDE MARKET*

Trading Technologies has developed the advanced concepts of Click and Dime trading and the Mercury display. These concepts display "Market Depth" and allow traders to view the Market Depth and to execute trades within the Market Depth with a single click of a computer mouse button. Market Depth represents the order book with the current bid and ask prices and quantities in the market. In other words, Market Depth is each bid and ask that was entered into the market that is not the inside market—market depth falls outside the market.

The market sends the price, order and fill information to each trader on the exchange. Trading Technologies software processes this information and maps it through simple algorithms to positions in a theoretical grid program. The grid program is proprietary software licensed to Trading Technologies that enables X_TRADER® to align the information on a screen in the format desired.

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How far into the market depth X_TRADER® can display depends on how much of the market depth the exchange provides. Some exchanges supply an infinite market depth, while others provide no market depth or only a few trades away from the inside market. Each trader can also choose how far into the market depth he wants to display on his screen.

Traders gain a significant advantage by seeing the market depth because they can see trends in the orders in the market. If a large amount of bids or asks are in the market near the trader's position, he may feel he should sell or buy before the inside market reaches the morass of orders. A lack of orders above or below the inside market might prompt a trader to enter orders near the inside market. Without seeing the market depth, no such strategy could be utilized.

X_TRADER® displays market depth in the Market Grid as follows:

	Contract	Depth	BidQty	BidPrc	AskPrc	AskQty	LastPrc	LastQty	Total
1	COM	0	765	7626	7627	21	7627	489	8230
2			626	7625	7628	815			
3			500	7624	7630	609			
4			500	7623	7631	2456			
5			700	7622	7632	367			

Row 1 represents the "Inside Market," which is the best bid price and quantity and the best ask price and quantity

Rows 2-5 represent the "Market depth."

Market Depth will list all available next-best bids and asks. The working buy and sell quantities for each price level will be displayed. Prices and quantities for the inside market and market depth update dynamically on a real time basis as such information is relayed from the market.

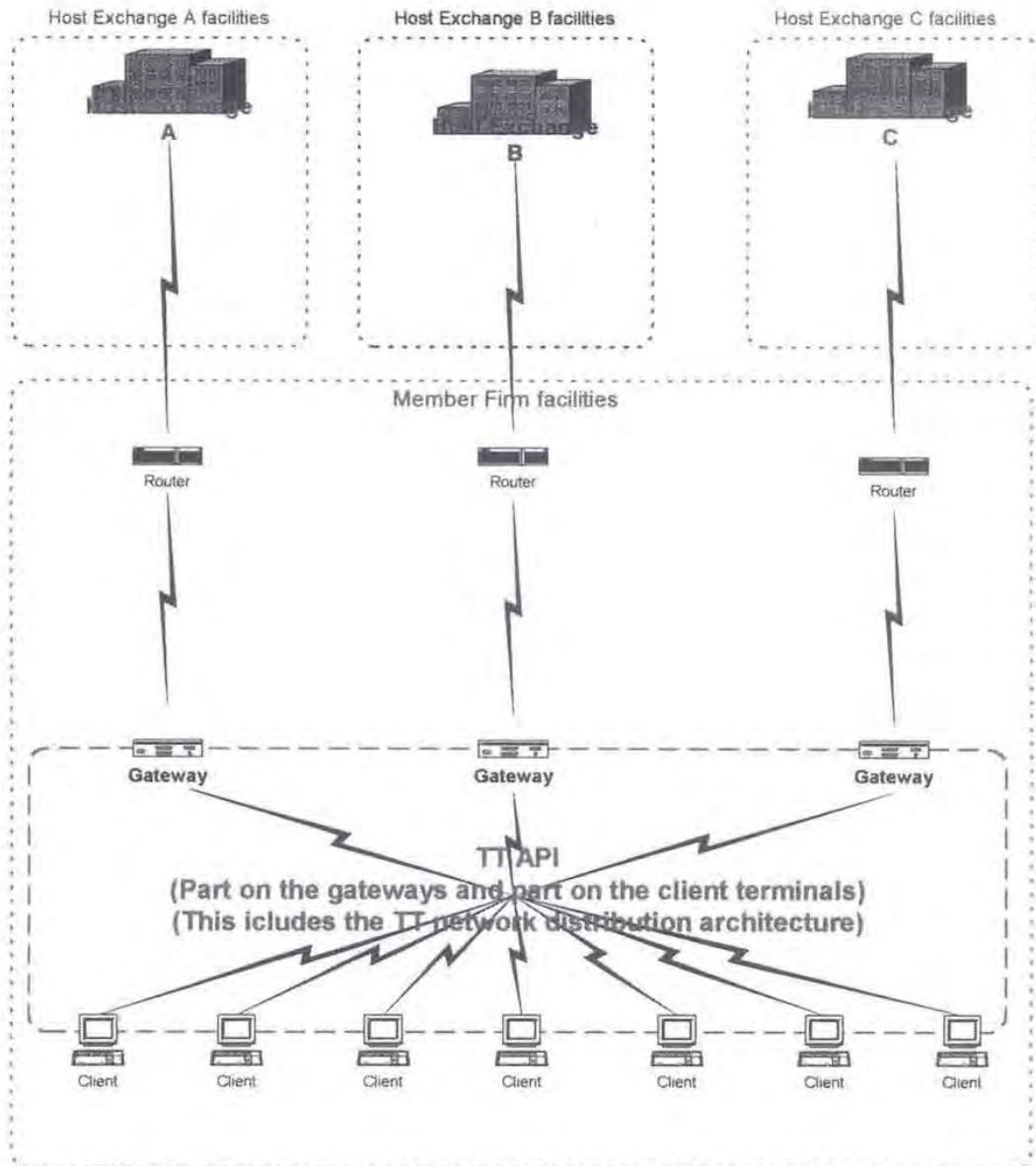
The Market Depth column will inform the trader of its status by displaying different colors. Yellow indicates that the application is waiting for data. Red indicates that the Market Depth has failed to receive the data from the server and has "timed out." Green indicates that the data has just been updated.

Note that any standard method may be used for displaying this and other data on the screen. By way of example, but not by way of limitation, each tradeable object is identified by a key string. A standard mapping table may be used to map the tradeable objects onto appropriate cells in a screen display.

When the system is designed to receive data from multiple exchanges, then the preferred implementation is to translate the data from various exchanges into a simple format. This

“translation” function is illustrated in the figure below. The Trading Technologies applications program interface (“TT API”) depicted in the figure translates the incoming data formats from the different exchanges to a simple preferred data format. This translation function may be disposed anywhere in the network, for example, at the gateway server, at the individual workstations or, as shown in the figure, at both. The gateway servers and the client workstations also cache historical data such as order books.

Connection to multiple exchanges



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The entire window with Market Depth can be formatted to appear on the trader's screen as follows:



B. Click Trading

- **INNOVATION #2: TRADING BASED ON MULTIPLE VARIABLES WITH A SINGLE CLICK IN THE HORIZONTAL MARKET DEPTH**

Click Trading enables a trader to execute trades with a single click within the market depth. The trader inputs a quantity and price range once and then sends orders to market with one click on a price field in the Market Depth grid. Utilizing the traditional X_TRADER® screens, a trader would enable Click trading in a context menu selection, which would add the following screen to the X_TRADER® screen displayed above:



- **INNOVATION #3: METHODOLOGY OF SETTING PRE-SPECIFIED VARIABLES WITH CLICKS IN EACH FIELD**

The number in each field may be adjusted up or down automatically by clicking in the field itself. There is no need to click the arrow buttons to the right of each field. For example, the Qty (Quantity) field, which represents the amount of the commodity to be

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traded can be adjusted simply by clicking in the white field rather than clicking the up or down buttons. The maximum order quantity is 9999.

• *INNOVATION #4: CLICK OFFSET SAFETY MECHANISM FOR CLICK TRADING*

The Click Offset field, which is inactive in the above screen shot, and thus greyed out, is a safety device used with the Click trading mode that won't allow a trader to send an order that is too far away from the Last Traded Price. Effectively, the trader establishes a floor or ceiling above or below the last traded price by enabling Click Offset. To use the Offset feature, a trader would set the +/- value to zero. He would then set a figure in the Click Offset field. This will halt any orders that are above or below the last traded price by at least the number of ticks in the Click Offset field. A "tick" is the minimum change in a price value that is set by the exchange for each commodity (for example, \$.01, \$.05, \$.10 or any other value).

Without the Click Offset feature, a trader might intend to click on a particular price, but between the time he decides to do so and the time he actually clicks (which may be only hundredths of a second) the price may change. He may not be able to stop the downward motion of his finger and the order would be sent to market at the wrong price. Sometimes the change in price is significant and could cost the trader a lot of money.

Using Click Offset a trader could trade in the market depth, but no order would be sent to market that is entered by the trader for a price further from the last price than the figure displayed in the Click Offset field.

Using the following screen shot, the following trading scenario could take place:

Contract	Depth	BidQty	BidPre	AskPre	AskQty	LastPre	LastQty	Total
CDH8	♀	785	7626	7627	21	7627	489	6230
		526	7625	7629	315			
		500	7624	7630	600			
		500	7623	7631	2450			
		200	7622	7632	300			

- Because the Click Offset field is in use, the trader cannot trade more than 2 ticks from the last traded price. In this screen, the last traded price is 7627 so the trader might right click on 7629, which is one row below the inside market ask price. This would send a buy order to the market for his previously entered quantity (10 in the screen above) for 7627. Because this is within two ticks of the last traded ask price, the order would go to the market. All 10 lots would be filled because there are 836 (815 plus 21) lots in the market at least at this price.
- If the trader clicked on 7630 or higher, he could not enter a trade because the price is greater than 2 ticks above the last traded price.
- **INNOVATION #5: PRICE SETTING AUGMENTATION BASED ON A PRESET VARIABLE (CLICK +/-)**

Trading with Click +/- allows a trader to chase a fast moving market up to a certain amount of ticks. A trader would set the number of ticks in the Click +/- field once. He would then be able to send orders to market with a single click in the market depth for a price up to (or down to if selling) the price clicked plus (or minus if selling) the number of ticks in the Click +/- field. The best available order in the market within the preset parameters would be filled.

If the market was moving fast and the inside market was rapidly increasing or decreasing (or both alternatively), Click +/- will insure that the trader can keep up with the changes. Using the traditional electronic trading method, he might not be able to sell or buy large quantities at or near the price he needs because the prices moved before he could enter all of the required data. Using Click +/-, he can trade pre-specified quantities at any chosen

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price plus or minus the ticks chosen. This might insure that his trades get filled before the market moves away.

The following screen depicts Click trading with the Click Offset feature disabled and a Click +/- quantity greater than 0 entered. This entry will enable the trader to trade at any price he clicks in the market grid and enter an order for up to (or down to if selling) 5 ticks above (or below) the clicked price.

In the above screen shot the following trading scenarios might take place:

- The trader seeks to sell 10 lots, so he clicks on the 7623 Bid Price, which is three below the inside market. This will send an order to market to sell 10 lots for as low as 7618 (7623 minus 5 ticks). The best available price will be filled first. Thus, in this scenario, all 10 lots will be filled because offers exist in the market place in this price range that amount to many more than 10 lots. Note that without Click Offset enabled, this trade will go through regardless of how far away from the Last Price it is.
- The trader would buy 10 lots for as much as 7635 by clicking on the 7630 field in the Ask Price column. All of these orders will also be filled.

Equations for Innovations 4 & 5:

The concepts set forth in Innovations 4 & 5 can be reduced to the following formulas:

KEY:

Ask Price clicked with Click trading button = A
 Bid Price clicked with Click trading button = B
 Last Traded Price = L
 Click Offset value = Off
 Click +/- value = C
 Quantity = Q
 Buy limit order sent to the market = Bo
 Sell limit order sent to the market = So

Equations:

If $C > 0$ then $Bo = (A + C)Q$

If $C < 0$ then $So = (B - C)Q$

If $C = 0$ and if absolute value of $(L-A) > \text{Off}$ then NO ORDER SENT

If $C = 0$ and if absolute value of $(L-B) > \text{Off}$ then NO ORDER SENT

If $C = 0$ and if absolute value of $(L-A) \leq \text{Off}$ then $Bo = (A)Q$

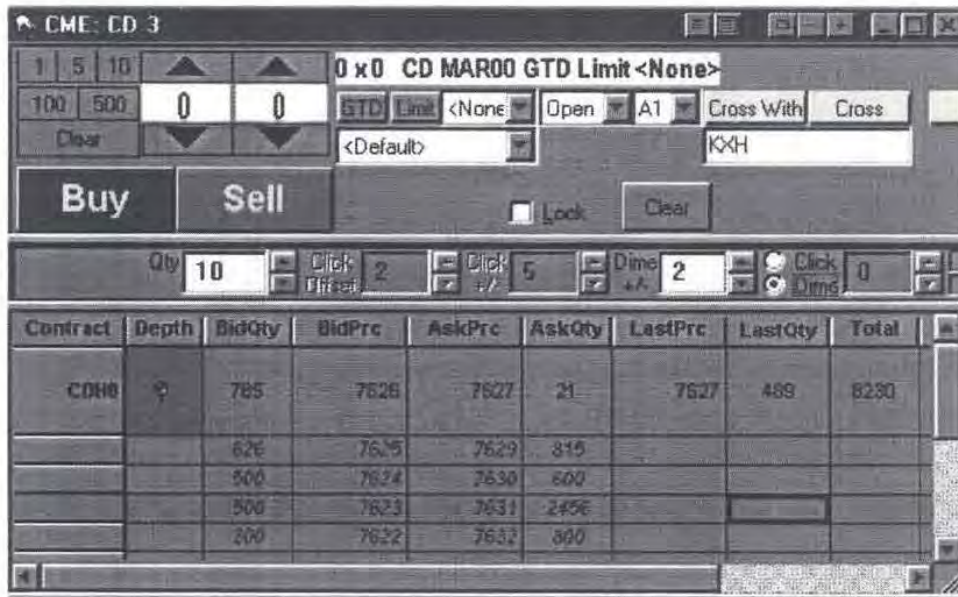
If $C = 0$ and if absolute value of $(L-B) \leq \text{Off}$ then $So = (B)Q$

• **INNOVATION #5: SAFETY OVERRIDE AND PRICE SETTING AUGMENTATION BASED ON A PRESET VARIABLE (DIME +/-)**

Dime trading allows traders to join the market at a value above or below the best bid or ask by a specified number. Using Dime +/- a trader would enter orders into the market that would not be filled until an equal match met the order in the market. The trader would select the quantity as he did when Click trading and enter the tick amount in the "dime +/-" field. A setting of zero ("0") ticks will enter an order for the price clicked. A tick setting of any amount greater than or less than zero ("0") sends an order to the market for the price clicked plus (minus if selling) the dime +/- setting. If the trader clicked on the Bid order column, a bid would be sent, while a click on the Ask column would send an Ask order. This type of trading may be utilized to join the market or to move the prevailing prices up or down.

The following screen shot shows an X_TRADER® screen with dime trading enabled:

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Using the above screen shot, the following trading scenarios could take place:

- In this screen, the trader might right click on 7622, which is four rows below the inside market bid price. This would send a buy order to the market for his previously entered quantity (10 in the screen above) for 7624 or better (up to two ticks above the clicked price). Nothing would be filled at this point. Rather, the orders would be placed in the market as a Bid limit order at 7624 and would only be filled if an Ask order entered the market for 7624 or better.
- If Dime +/- was set at a negative number, for example -3, a right click on 7622 in the BidPrc column would enter a Bid limit order for 7619. None of these would be filled in the market until the asks meet or beat 7619.

Equations for Innovation #6

Dime trading can be reduced to the following formulas:

KEY:

Ask Price clicked with Dime trading button = A

Bid Price clicked with Dime trading button = B

Dime +/- value = D

Quantity = Q

Buy limit order sent to the market = Bo

Sell limit order sent to the market = So


Equations:

$$B_o = (A + D)Q$$

$$S_o = (B - D)Q$$

- **INNOVATION #6: USE OF A THREE BUTTON MOUSE WHEN TRADING IN A HORIZONTALLY DISPLAYED DEPTH OF MARKET WHERE THE MIDDLE MOUSE BUTTON EFFECTS DIME TRADING AND THE RIGHT MOUSE BUTTON EFFECTS CLICK TRADING**


If using a three-button mouse, the trader would “dime” the market with a single click of the middle mouse button. If the trader selected a 3 button mouse in the Click Trading

Properties setup, these radio buttons are inactive . A trader would simply maneuver the screen cursor above the price in the market depth and click the middle button. A dime trading order would be sent to market in the manner described above.

Using the three button mouse, a click on the right mouse button with the cursor positioned above a price in the market depth would send a click trade to market as described above.

- **INNOVATION #7: USE OF A TWO BUTTON MOUSE WHEN TRADING IN A HORIZONTALLY DISPLAYED DEPTH OF MARKET WITH THE ABILITY TO TOGGLE (SWITCH BETWEEN) DIME AND CLICK TRADING WHERE THE RIGHT MOUSE BUTTON EFFECTS BOTH DIME AND CLICK TRADING DEPENDING ON WHICH IS ENABLED**

If using a two-button mouse, the dime radio button must be selected before using the right mouse button to send the order to market. If the trader’s Click Trading Properties

designates a 2 button mouse, these radio buttons are active  and a trader must manually select Click or Dime trading modes. Once chosen, the trader can send as many orders as he desires, each with one click of the right mouse button and each either a Click or Dime order depending on which mode he chose.

- **INNOVATION #8: ABILITY TO AUGMENT CLICK TRADING LOGIC WITH THEO CHECK**

Traders may also enter or restrict trades based on pre-determined theoretical values. The values are derived from equations, which can be set up in various programs such as Excel (a Microsoft program) or other proprietary software other than X_TRADER®.

X_TRADER® allows the trader to input the value derived from the equation into a field, which would appear below the following Theoretical Edge Implementation field:

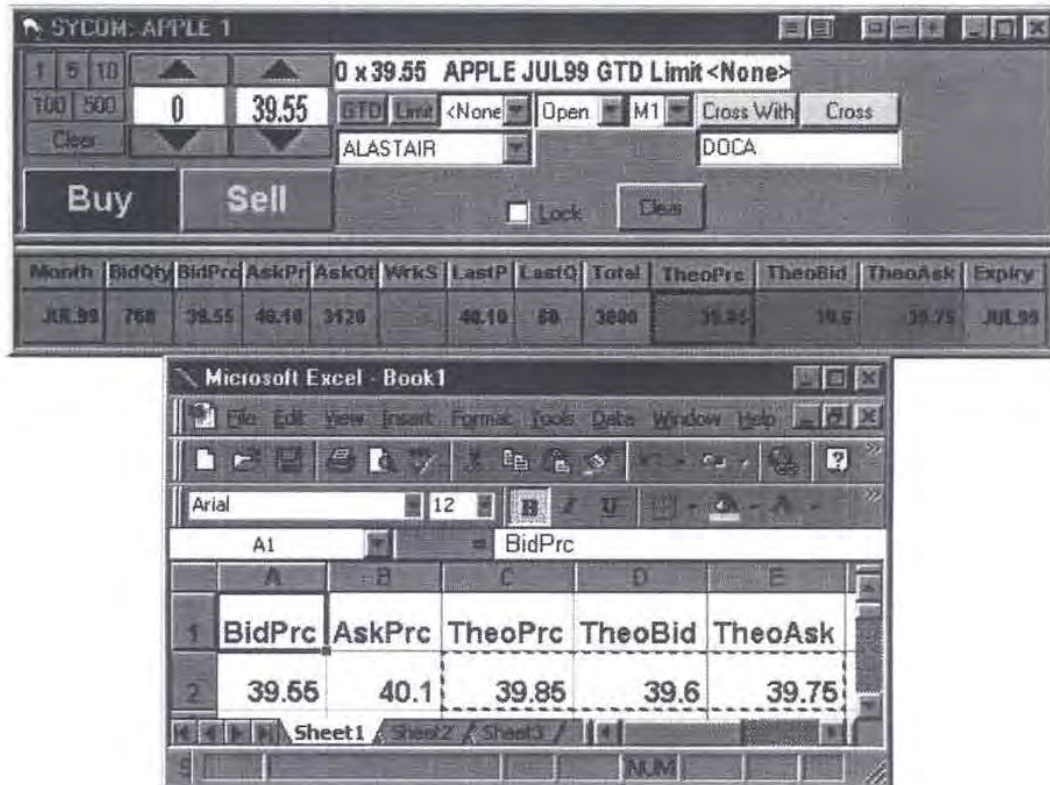


The trader’s click trades would then be restricted by this value and no order would be allowed that was not as good or better than the theoretical value. This value would be applied regardless of whether the trader attempted to buy or sell. Thus, if the theoretical value was 102 and the trader attempted to click trade in the BidPrc column

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at 101, no order would be sent because the clicked value was worse than the theoretical value. Clicks on 102, 103, 104 or higher in the BidPrc column would be allowed because these would send orders as good as or better than the theoretical value.

To engage the theoretical price feature, the trader would click in the box next to "Theo" in the screen shot above. The theoretical values would be imported into X_TRADER® as demonstrated in the following screen shot:



• **INNOVATION #9: ABILITY TO AUGMENT CLICK TRADING LOGIC WITH B/A**

If the trader clicked in the box next to B/A in the screen shot above, a separate theoretical value could be established for each bid and ask. Separate bid and ask theoretical values would be established for each row in the market depth. Each attempted bid or ask order would be checked against each corresponding theoretical bid or ask value. If the clicked price is as good or better than the corresponding Bid or Ask theoretical value, then the order will be sent.

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• **INNOVATION #10: ABILITY TO MODIFY EDGE FOR THEO CHECK**

Traders may also edge their trades away from the theoretical values described above. When Theo or B/A are checked, a white field appears in the box to the left of "Theo" and "B/A." Traders can input a number of ticks here which allows them to enter orders that are within the specified number of ticks away from the corresponding theoretical value. For example, with a 12.2 theoretical, a 12.6 market bid, and an edge value of 4 ticks, a trader's order to sell the bid will pass the edge test. But if the bid moved one tick lower, to 12.5, an attempt to sell would fail the edge test, because only 3 ticks of edge would be made on the trade.

Edge trading can also be used with the Click +/- setting. A trader who sets the +/- value to 4 ticks will construct a bid 4 ticks higher than the offer or an offer 4 ticks lower than the bid. If this constructed price fails the edge test, the order won't be sent.

X_TRADER MERCURY

As explained above, X_TRADER® greatly improves the speed and accuracy of electronic trading. However, the display of market depth and the manner in which traders trade within the market depth can be effected in different manners, which many traders will find materially better, faster and more accurate. Despite the safety feature of Click Offset and the innovative Click and Dime trading, which allow traders to keep up with fast moving markets, a fluid market can still leave a trader behind. Rapid price fluctuation may move the market beyond even the Click Offset and click and Dime trades. In addition, some traders may find the display of market depth to be difficult to follow. X_TRADER® lists charts the market depth vertically so that both Bid and Ask prices descend the grid. In X_TRADER®, the Bid prices descend the market grid as the prices decrease. However, in a somewhat counterintuitive manner, Ask prices also descend the market grid as these prices actually increase. Mercury remedies these issues in a new, innovative and logical manner. Mercury also provides an order entry system, market grid, fill window and summary of market orders in one simple window. Such a condensed display materially simplifies the trading system by entering a tracking trades in an extremely efficient manner.

• **INNOVATION #11: VERTICAL DISPLAY OF MARKET DATA INCLUDING MARKET DEPTH**

X_TRADER Mercury displays market depth in a logical, vertical fashion or horizontally or at some other convenient angle or configuration. A vertical field will be shown and described for convenience, but the field could be horizontal or at an angle.

In turn, Mercury further increases the speed of trading and the likelihood of entering orders at desired prices with desired quantities. Mercury displays a static vertical column

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of prices with the bids and asks displayed in vertical columns to the side of the price column. An example of this display follows:

SYCOM FGBl DEC99					
EW	10:48:44	BldQ	AskQ	Prc	LTO
	L 3		104	99	
	R 5		24	98	
	720		33	97	
	X 10		115	96	
	0		32	95	
	10 1H		27	94	
	50 3H		63	93	
S 0 W 24	1K 6H		45	92	
S 0 W 7	CLR		28	91	
	X 10		20	90	10
	17				
B 0 W 15	CXL	18		89	
B 0 W 13	+ -	97		88	
	NET 0	30		87	
		43		86	
B 0 W 17	NET REAL	110		85	
		23		84	
		31		83	
		125		82	
		21		81	

Bid quantities are in the blue column and ask quantities are in the red column. In this example, the inside market is 18 (best bid quantity) at 89 (best bid price) and 20 (best ask quantity) at 90 (best ask price).

Each field is described as follows:

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INNOVATION #12: THE DYNAMIC, VERTICAL DISPLAY OF MARKET MOVEMENT

The inside market and market depth ascend and descend as prices in the market increase and decrease. For example, the following screen depicts the same market at a later interval where the inside market has risen three ticks:

SYCOM FGBL DEC99						
EW	10:48:44		BidQ	AskQ	Prc	LTO
	L	3		104	99	
	R	5		24	98	
	720			33	97	
	X	10		115	96	
	0			32	95	
	10	1H		27	94	
	50	3H		63	93	10
S 10 W 14	1K	5H		43	92	
	CLR			125	91	
	X	10		97	90	
	17	F		18	89	
B 0 W 15	CXL			97	88	
B 0 W 13	NET 0			30	87	
	NET REAL			43	86	
B 0 W 17				110	85	
				23	84	
				31	83	
				125	82	
				21	81	

10:48:44 - 222557409

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Now the inside market is at Price: 93 with the AskQ: 63 and the BidQ: 43. The price column remained static, but the corresponding bids and asks rose up the price column. Market Depth similarly ascends and descends the price column, leaving a vertical history of the market.

- ***INNOVATION #13: HORIZONTAL DISPLAY OF MARKET DATA INCLUDING MARKET DEPTH***

The same information and features can be displayed and enabled in a horizontal fashion.

- ***INNOVATION #14: THE DYNAMIC, HORIZONTAL DISPLAY OF MARKET MOVEMENT***

Just as the market ascends and descends the vertical Mercury display, the market will move left and right in the horizontal Mercury display.

- ***INNOVATION #15: SINGLE CLICK ORDER ENTRY IN MERCURY***

Using Mercury, a trader would first designate the desired commodity and quantities, then he can trade with single clicks of the right or left mouse button.

SECURITIES FUTURE SYSTEMS

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SYCOM FGBL DEC99					
EW	10:48:44	BidQ	AskQ	Prc	LTO
	L		104	99	
	R		24	98	
	720		33	97	
	X 10		115	96	
	0		32	95	
	10 1H		27	94	
	60 3H		63	93	
S 0 W 24	1K 6H		45	92	
S 0 W 7	CLR		28	91	
	X 10		20	90	10
	17				
H 0 W 15	CXL	18		89	
B 0 W 13	+ -	97		88	
	NET 0	30		87	
		43		86	
B 0 W 17	NET REAL	110		85	
		23		84	
		31		83	
		125		82	
		21		81	

50405202 - 020202

For example, using the above condensed screen shot, a left click on the 18 in the BidQ column will send an order to market to sell 17 (quantity # chosen on the Quantity Description pull down menu) lots of the commodity at a price of 89 (the corresponding price). A left click on the 20 in the AskQ column will send an order to market to buy 17 lots at a price of 90.

orders outstanding in the market to purchase the commodity at each corresponding price. The quantity 5 is the quantity pre-set in the **R** field.

Similarly, a right click in the BidQ column at the same price of 87 would send a buy order to market for a quantity of 5. The quantity is determined in the same manner as above. In this example, though, there are no orders in the market that equal or better the chosen price—there are no quantities in the AskQ column that equal or better this price. So, the sum of the equal or better quantities is zero (“0”). The total order entered by the trader will be the value in the **R** field, which is 5.

An order entered with the left mouse button and the “Offset” option chosen in the quantity description field will be calculated in the same way as above, but the quantity in the **L** field will be added instead of the quantity in the **R** field. Thus, a left click in the BidQ column in the 92 price row will send a sell order to market at a price of 92 and a quantity of 96. 96 is the sum of all the quantities 45, 28, 20 and 3. 45, 28 and 20 are all quantities in the market that would meet or better the trader’s buy order price of 92. These quantities are displayed in the AskQ column because this column represents the orders outstanding in the market to sell the commodity at each corresponding price. The quantity 3 is the quantity pre-set in the **L** field.

The values in the **L** or **R** fields may be negative numbers. This would effectively decrease the total quantity sent to market. In other words, in the example above, if the **R** field was -5, the total quantity sent to market would be 140 ($30 + 97 + 18 + (-5)$).

If a trader chose the “NetPos” option in the quantity description field, a right click would still work as explained above. A left click would enter an order with a price corresponding to the price row clicked and a quantity equal to the current Net position of the trader. The net position of the trader is the trader’s current position on the chosen contract. In other words, if the trader bought 10 more contracts than he sold, this value would be 10. NetPos would not affect the quantity of an order sent with a right click.

If the trader chose a number value in the quantity description, a left click would send an order to market for the current quantity chosen by the trader. The default value of the current quantity will be the number entered in the quantity description field, but it could be changed by adjusting the figure in the current quantity field.

Equations for order entry with Mercury

Key:

P = Price value of row clicked

R = Value in **R** field

L = Value in **L** field

Q = Current Quantity

Q_a = Total of all quantities in AskQ column at an equal or better price than P

Q_b = Total of all quantities in BidQ column at an equal or better price than P

N = Current Net Position
 Bo = Buy order sent to market
 So = Sell order sent to market

- **Any order entered using right mouse button**
**All orders using the right mouse button will be limit orders.*

$$Bo = (Q_a + R)P$$

$$So = (Q_b + R)P$$

- **Orders entered using the left mouse button**
 If "Offset" mode chosen in Quantity Description field then:
**In Offset mode, all orders using the left mouse button will be limit orders.*

$$Bo = (Q_a + L)P$$

$$So = (Q_b + L)P$$

If "number" mode chosen in Quantity Description field then:

$$Bo = QP$$

$$So = QP$$

- If "NetPos" mode chosen in Quantity Description field then:
**In "NetPos" mode, all orders using the left mouse button will be limit orders.*

$$Bo = NP$$

$$So = NP$$

- **INNOVATION #17: DELETING ALL ORDERS WORKING IN THE MARKET WITH A SINGLE CLICK**

Mercury also allows a trader to delete all of his working trades with a single click of either the right or left mouse button anywhere in the last traded quantity (LTQ) column. This allows a trader to exit the market immediately. Traders will use this feature when they are losing money and want to stop the losses from piling up. Traders may also use this feature to quickly exit the market upon making a desired profit.

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- ***INNOVATION #18: DELETING ALL ORDERS WORKING IN THE MARKET AT A GIVEN PRICE LEVEL WITH A SINGLE CLICK***

Mercury also allows a trader to delete all of his orders from the market at a particular price level. A click with either mouse button in the Entered/Working (E/W) column will delete all working orders in the cell that was clicked. Thus, if a trader believes that a previously sent orders at a particular price that have not been filled would be poor trades, he can delete these orders with a single click.

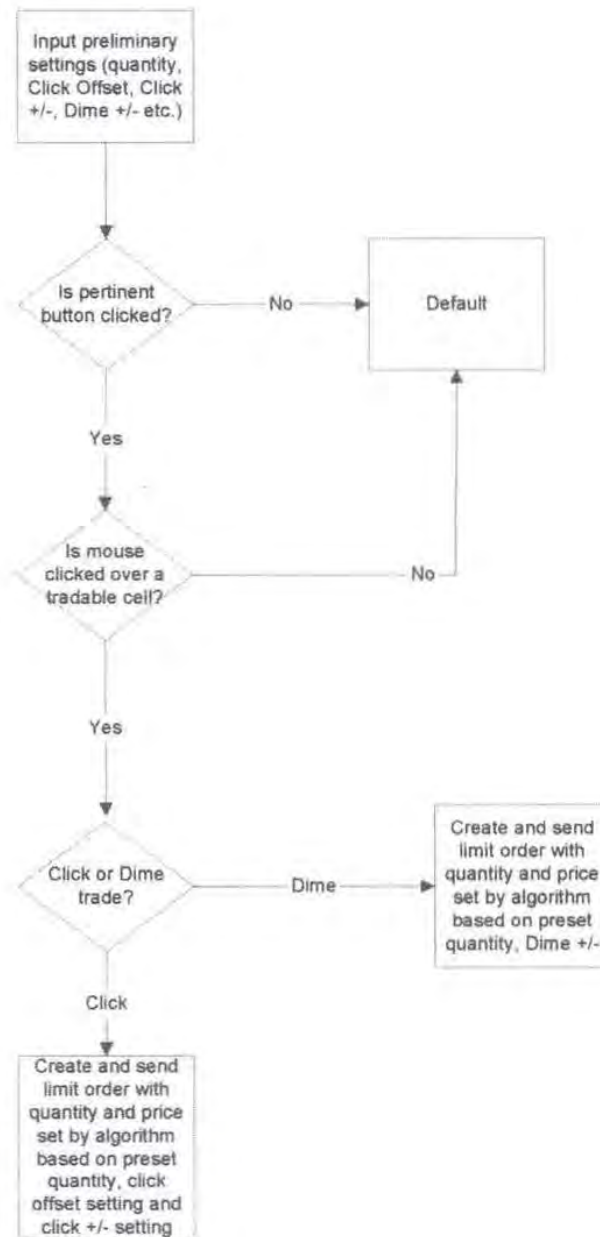
- ***INNOVATION #19: CENTERING THE INSIDE MARKET ON A SCREEN WITH A SINGLE CLICK***

As the market ascends or descends the price column, the inside market might go above or below the price column displayed on a trader's screen. Usually a trader will want to be able to see the inside market to assess future trades. Mercury solves this problem with a one click centering feature. With a single click at any point in the grey area below the "Net Real" button, Mercury will re-center the inside market on the trader's screen.

FLOW CHARTS OF THE PROCESSES:

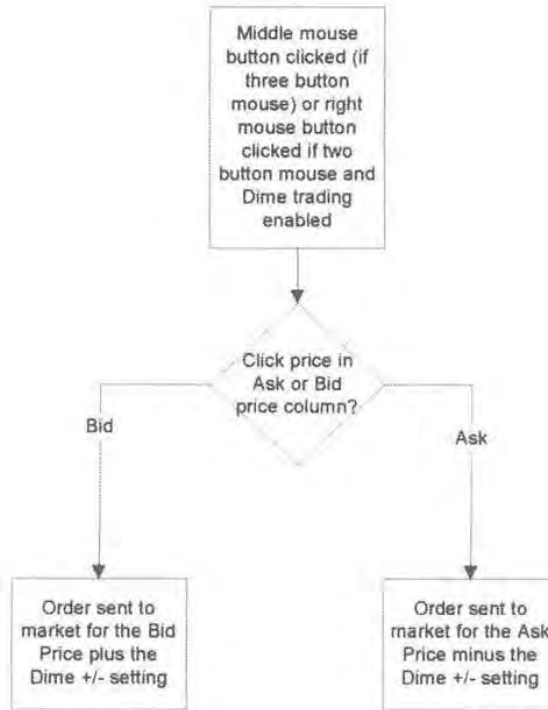
Click and Dime Trading

Click and Dime Trading



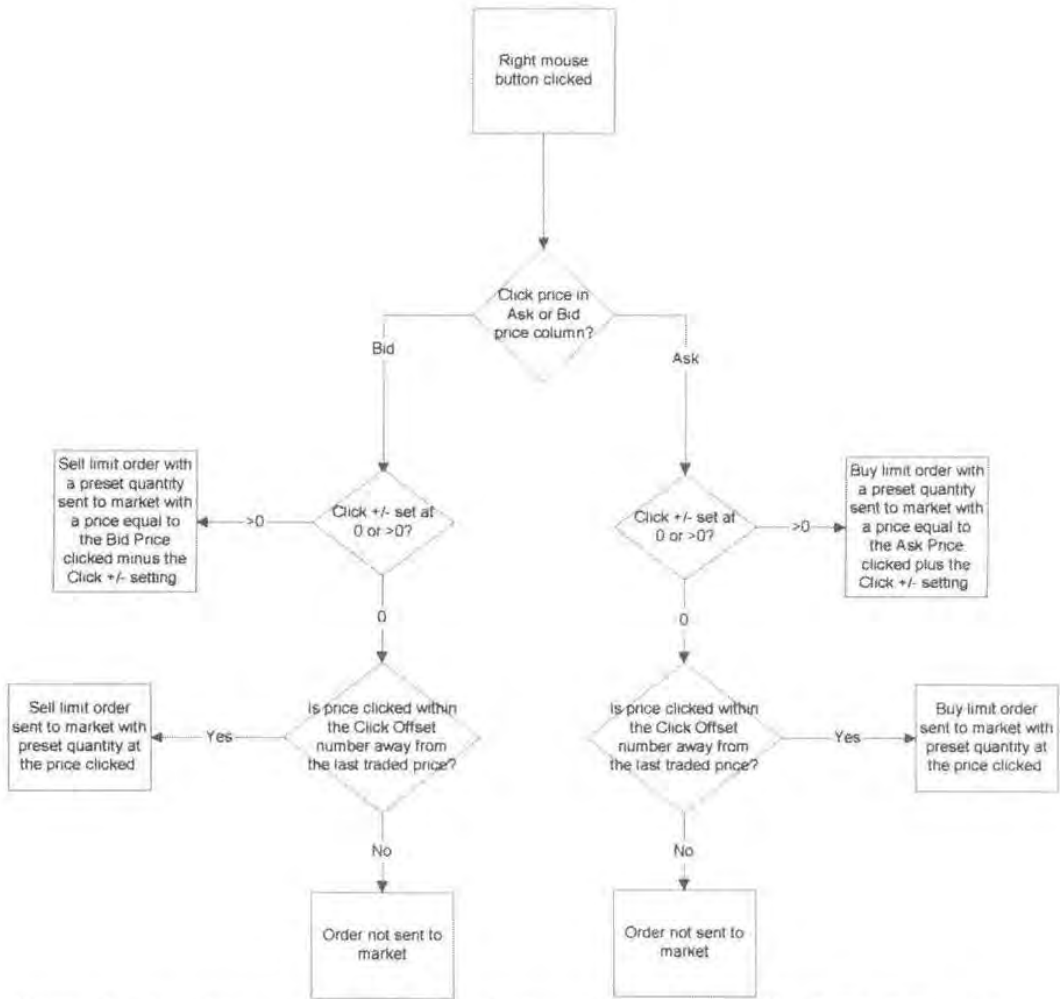
Flowchart of Dime Trade Algorithm

Algorithm for Dime Trade



Flowchart for Algorithm for Click Trading

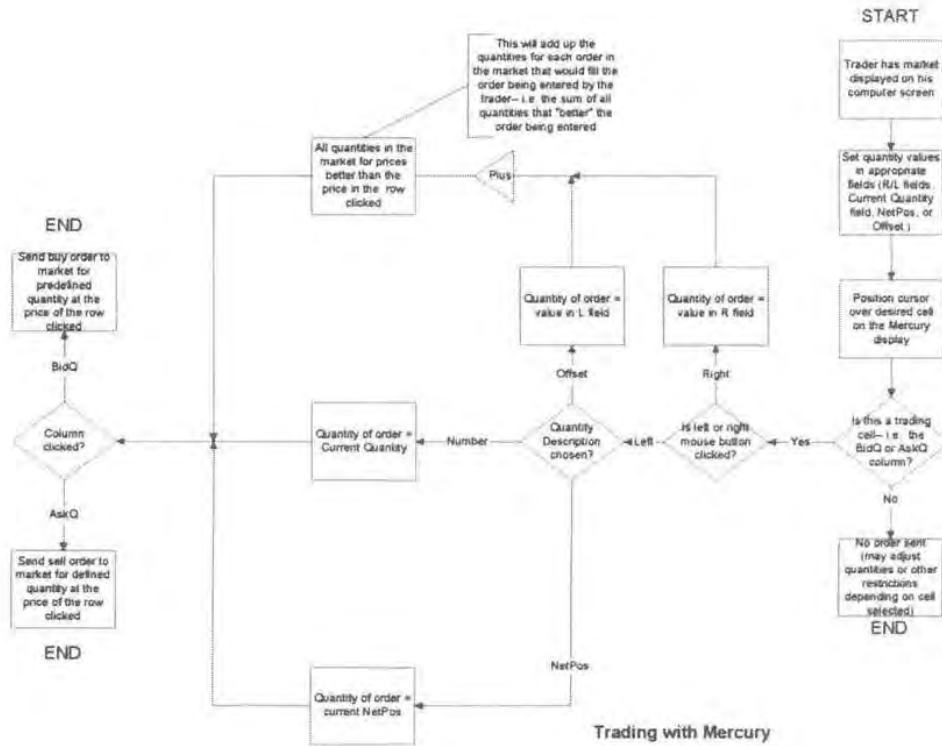
Algorithm for Click Trade



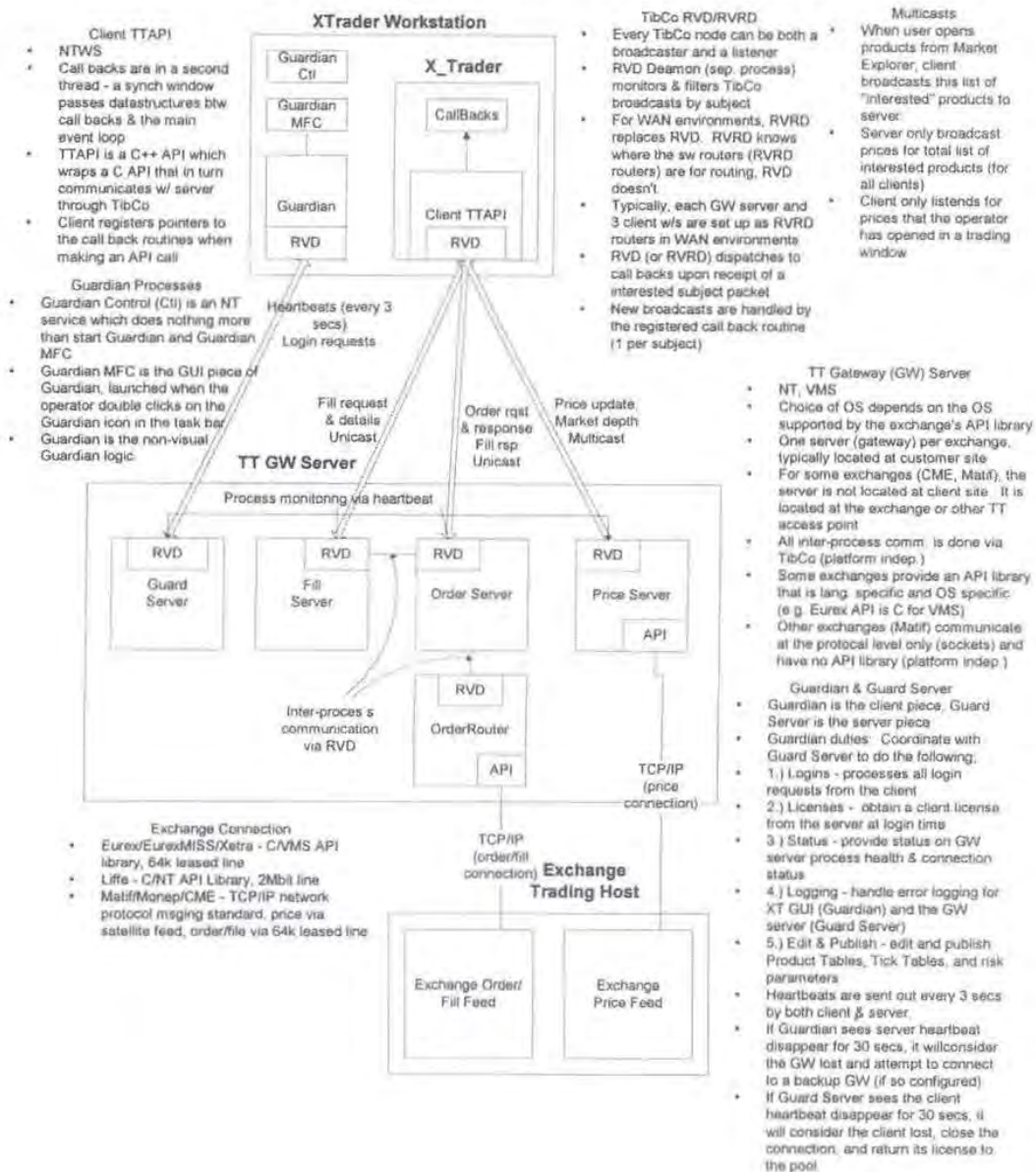
*Note: Limit orders may have other restrictions to them (like FOK, GTD, GTC etc.), which may further restrict these orders.

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Mercury Display and Trading



X_Trader System Architecture at a Glance



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Exhibit 5

27

TRADING TECHNOLOGIES
VS
PRE-DELIBERATION INSTRUCTIONS eSPEED, INC, et al
JUDGE MORAN

FILED

OCT 10 2007

Judge James B. Moran
United States District Court

2 Pre-Deliberation Instructions

2.1 General Instructions

2.1.1 Introduction

Ladies and gentlemen of the jury, you have heard the evidence and arguments in this case and the time has come for you to weigh the evidence, deliberate and reach a verdict. Now it is time for me to instruct you about the law that you must follow in deciding this case. I will start by explaining your duties and the general rules that apply in every civil case. Then I will explain some rules that you must use in evaluating particular testimony and evidence. I will explain the positions of the parties and the law you will apply in this case. And last, I will explain the rules that you must follow during your deliberations in the jury room, and the possible verdicts that you may return. Please listen very carefully to everything I say.

It is your duty as jurors to follow the law as I shall state it to you, and to apply that law to the facts as you find them from the evidence in the case. You are not to single out one instruction alone as stating the law, but must consider the instructions as a whole. You should not be concerned with the wisdom of any rule that I state. Regardless of any opinion that you may have as to what the law may be – or ought to be – it would violate your sworn duty to base a verdict upon any view of the law other than that which I give you.

2.1.2 Role of the Jury

As the members of the jury, you are the sole and exclusive judges of the facts. You pass upon the evidence. You determine the credibility of the witnesses. You resolve any conflicts in the testimony. You draw whatever reasonable inferences you decide to draw from the facts as you have determined them, and you determine the weight of the evidence.

In deciding the facts of this case you must not be swayed by bias or prejudice or favor as to any party. Our system of law does not permit jurors to be governed by prejudice or sympathy or public opinion. Both the parties and the public expect that you will carefully and impartially consider all of the evidence in the case, follow the law as stated by the Court, and reach a just verdict regardless of the consequences.

This case shall be considered and decided by you as an action between persons of equal standing in the community, and holding the same or similar stations in life. Each party is entitled to a fair trial at your hands, and a corporation is entitled to the same fair trial as an individual. The law respects all persons equally, and all persons including corporations stand equal before the law and are to be dealt with as equals in a court of justice.

In determining the facts, you must consider only the evidence I have admitted in the case. Any evidence to which I sustained an objection or that I ordered stricken must be disregarded.

Remember that any statements, objections or arguments made by the lawyers are not evidence in the case. The function of the lawyers is to point out those things that are most significant or most helpful to their side of the case, and in so doing, to call your attention to certain facts or inferences that might otherwise escape your notice.

In the final analysis, however, it is your own recollection and interpretation of the evidence that controls in the case. What the lawyers say is not binding upon you.

The evidence from which you are to decide the facts consists of:

1. the sworn testimony of witnesses, on both direct and cross-examination;
2. the exhibits that have been received into evidence, and
3. any facts to which TT and eSpeed have agreed or stipulated; and
4. any facts that I have judicially noticed.

While you should consider only the evidence in the case, you are permitted to draw such reasonable inferences from the testimony as you feel are justified in the light of common experience. In other words, you may make deductions and reach conclusions that reason and common sense lead you to draw from the facts that have been established by the testimony and evidence in the case.

In determining any fact in issue you may consider the testimony of all witnesses, regardless of who may have called them, and all the exhibits received in evidence, regardless of who may have produced them.

Any notes that you may have taken during this trial are only aids to your memory. If your memory differs from your notes, you should rely on your memory and not on the notes. The notes are not evidence. If you have not taken notes, you should rely on your independent recollection of the evidence and should not be unduly influenced by the notes of other jurors. Notes are not entitled to any greater weight than the recollection or impression of each juror about the testimony.

Anything you may have seen or heard when the Court was not in session is not evidence. You are to decide the case solely on the evidence at trial. In considering the evidence in this case, you are not required to set aside your own observation and experience in the affairs of life. You have a right to consider all the evidence in the light of your own observation and experience in the affairs of life.

2.1.3 Juror Oath

In determining the facts, you are reminded that you took an oath to render judgment impartially and fairly, without prejudice or sympathy, solely upon the evidence in the case and the applicable law. I know that you will do this and reach a just and true verdict.

2.1.4 Jury to Disregard Court's View

I have expressed no opinion as to which witnesses are, or are not, worthy of belief, what facts are, or are not, established, or what inferences, if any, should be drawn from the evidence. If anything I have said or done has seemed to indicate an opinion relating to any of these matters, I instruct you to disregard it. In making your determination of the facts in this case, your judgment must be applied only to that which is properly in evidence.

From time to time I have had to rule on the admissibility of evidence, although I have tried to do so, when possible, out of your hearing. You must have no concern with the reasons for any of my rulings on the evidence, and you are not to draw any inferences from them, although you must abide by my decisions on what evidence you can and cannot consider. Whether offered evidence is admissible is purely a question of law for me to decide. Of course, you will dismiss from your mind completely any evidence which has been ruled out of the case by the court.

2.1.5 What Is and Is Not Evidence

The evidence in this case is the sworn testimony of the witnesses, the exhibits I allowed into evidence, the stipulations of the parties, and any facts I have judicially noticed.

By contrast, the questions or statements of a lawyer are not evidence. It is the witnesses' answers that are evidence, not the questions. Arguments by lawyers are not evidence, because the lawyers are not witnesses. What they have said to you in their opening statements and in their closing arguments is intended to help you understand the evidence to reach your verdict. However, if your recollection of the facts differs from the lawyers' statements, it is your recollection which controls.

Testimony that has been stricken or excluded is not evidence and may not be considered by you in rendering your verdict. You may also not consider any answer that I directed you to disregard. Also, if certain testimony was received for a limited purpose – such as for the purpose of assessing a witness' credibility – you must follow the limiting instructions I gave you at that time.

Exhibits which have been marked for identification may not be considered by you as evidence until and unless they have been received in evidence by the court. Exhibits marked for identification but not admitted are not evidence, nor are materials which were brought forth only to refresh a witness' recollection.

You may see “demonstrative exhibits” during the trial. These are exhibits that the lawyers or the witnesses have prepared to help you understand particular testimony. While you may consider these exhibits as part of the testimony, they are not evidence unless I specifically admit them into evidence.

It is for you alone to decide the weight, if any, to be given to the testimony you have heard and the exhibits you have seen.

2.1.6. Direct and Circumstantial Evidence

Now, some of you may have heard the terms "direct evidence" and "circumstantial evidence."

Direct evidence is simply evidence like the testimony of an eyewitness, which, if you believe it, directly proves a fact. If a witness testified that he saw it raining outside, and you believed him, that would be direct evidence that it was raining.

Circumstantial evidence is simply a chain of circumstances that indirectly proves a fact. If someone walked into the courtroom wearing a raincoat covered with drops of water and carrying a wet hat that would be circumstantial evidence from which you could conclude that it was raining.

It is your job to decide how much weight to give the direct and circumstantial evidence. The law makes no distinction between the weight that you should give to either one, nor does it say that one is any better evidence than the other. You should consider all the evidence, both direct and circumstantial, and give it whatever weight you believe it deserves.

2.1.7 Stipulation of Facts

A stipulation of facts is an agreement among the parties that a certain fact is true. You must regard such agreed facts as true.

The facts the parties have stipulated to are as follows:

If the correct priority date is June 9, 2000, then the patents are invalid.

2.1.8 Stipulation of Testimony

A stipulation of testimony is an agreement among the parties that, if called, a witness would have given certain testimony. You must accept as true the fact that the witness would have given that testimony. However, it is for you to determine the effect, if any, to be given that testimony.

2.1.9 Interrogatories

You have heard and seen evidence in this case that is in the form of interrogatories.

Interrogatories are written questions posed by one side that call for written answers under oath from the other side. Both the questions and answers are made before trial during what is called pretrial discovery, and each side is entitled to seek such discovery from the other.

You may consider a party's answers to interrogatories as evidence against a party who made the answer, just as you would any other evidence that has been admitted in this case.

In this regard, you are not required to consider a party's answers to interrogatories as true, nor are you required to give them more weight than any other evidence. It is up to you to determine what weight, if any, should be given to the interrogatory answers that have been admitted as evidence.

One cautionary word on this subject: The question asked, however, is not evidence. You may only consider the interrogatory answer as evidence against the party who gave the answer.

2.1.10 Depositions

Some of the testimony before you is in the form of depositions that have been received in evidence. A deposition is simply a procedure where the attorneys for one side may question a witness or an adverse party under oath and the deposition is recorded by a court reporter. This is part of the pretrial discovery, and each side is entitled to take depositions. Depositions may be used at trial for a number of reasons, including because the particular witness could not be available live. You should consider the deposition testimony of a witness according to the same standards you would use to evaluate the testimony of a witness at trial. You should not accord live testimony higher weight than deposition testimony.

2.1.11 Witness Credibility

You must decide whether the testimony of each witness is truthful and accurate, in part, in whole, or not at all. You also must decide what weight, if any, you give to the testimony of each witness.

In evaluating the testimony of any witness, you may consider, among other things:

- the ability and opportunity the witness had to see, hear, or know the things that the witness testified about

- the witness's memory

- any interest, bias, or prejudice the witness may have

- the witness' intelligence

- the manner of the witness while testifying

- and the reasonableness of the witness' testimony in light of all the evidence in the case.

2.1.12 Expert Witnesses – Generally

In this case, I have permitted the parties to offer testimony by certain witnesses retained by the parties to express their opinions about matters that are in issue. A witness may be permitted to testify to an opinion on those matters about which he or she has special knowledge, skill, experience and training. Such testimony is presented to you on the theory that someone who is experienced and knowledgeable in the field can assist you in understanding the evidence or in reaching an independent decision on the facts.

In weighing this opinion testimony, you may consider the witness' qualifications, his or her opinions, the reasons for testifying, as well as all of the other considerations that ordinarily apply when you are deciding whether or not to believe a witness' testimony. You may give the opinion testimony whatever weight, if any, you find it deserves in light of all the evidence in this case. You should not, however, accept opinion testimony merely because I allowed the witness to testify concerning his or her opinion. Nor should you substitute it for your own reason, judgment and common sense. The determination of the facts in this case rests solely with you.

LAWYER INTERVIEWING WITNESS (MODEL 1.16)

It is proper for a lawyer to meet with any witness in preparation for trial.

ABSENCE OF EVIDENCE (MODEL 1.18)

The law does not require any party to call as a witness every person who might have knowledge of the facts related to this trial. Similarly, the law does not require any party to present as exhibits all papers and things mentioned during this trial.

NO NEED TO CONSIDER DAMAGES (MODEL 1.31)

If you decide for the Defendants on the question of patent infringement, then you should not consider the question of damages.

2.2 The Parties and Their Contentions

I will now review for you the parties' contentions and the law that you will have to consider in reaching your verdict.

At the beginning of the trial, I gave you some general information about patents and the patent system and a brief overview of the patent laws relevant to this case. I will now give you more detailed instructions about the patent laws that specifically relate to this case. If you would like to review my instructions at any time during your deliberations, they will be available to you in the jury room.

2.2.1 Summary of Issues

I will now summarize the issues that you must decide and for which I will provide instructions to guide your deliberations. You must decide the following four main issues, each of which must be decided separately:

1. Whether TT has proven by a preponderance of the evidence that the eSpeed Futures View, AutoSpeed Basis, and ECCO Ladder View products, which I shall refer to as the "Accused Products," infringes claims of the '132 and '304 Patents. The Verdict Sheet lists each of the claims at issue, which I shall refer to as the "Asserted Claims."

2. Whether TT has proven, by clear and convincing evidence, that the infringement was willful.

3. The amount of damages, if any, that TT has proven by a preponderance of the evidence.

4. Whether Defendants have proven by clear and convincing evidence that the correct priority date is June 9, 2000 instead of March 2, 2000.

5. Whether Defendants have proven by clear and convincing evidence that any Asserted Claim is invalid, either because of anticipation or obviousness.

2.2.3 Burden of Proof

When I say a particular party must prove something by “a preponderance of the evidence”, this is what I mean: When you have considered all the evidence in the case, you must be persuaded that it is more likely than not true. When I say that a particular party must prove something by “clear and convincing evidence,” this is what I mean: When you have considered all the evidence in the case, it produces in you an abiding conviction that the truth of a necessary fact is highly probable. Clear and convincing evidence is a higher burden than a preponderance of the evidence, but it does not require proof beyond a reasonable doubt.

2.3 Claim Construction

Before you decide the issues in this case, you will have to understand the patent "claims." Patent claims are numbered paragraphs at the end of the patent. They are "word pictures" intended to define the boundaries of the invention described and illustrated in the patent.

Only the claims of issued patents can be infringed. Neither the written description, which we have already discussed, nor the drawings of a patent can be infringed.

I will now explain to you the meaning of the claims.

2.3.1 Independent and Dependent Claims

A patent claim may be either an independent claim or a dependent claim. An *independent* claim does not refer to any other claim of the patent. An independent claim must be read separately from the other claims to determine the scope of the claim.

A *dependent* claim refers to at least one other claim in the patent. A dependent claim includes each of the limitations of the other claim or claims to which it refers, as well as the additional limitations recited in the dependent claim itself. Therefore, to determine what a dependent claim covers, it is necessary to look at both the dependent claim and all other claims to which it refers.

As an example, a patent may have a Claim 1 that is directed to a chair with 4 legs; there may then be a dependent Claim 2 that claims the four-legged chair of Claim 1, plus one additional leg. In this case, as an example, Claim 1 of the '304 Patent is an independent claim and recites several elements. Claim 2 of the '304 Patent is a dependent claim that refers to Claim 1 and includes an additional element or limitation. Claim 2 therefore must include each of the elements of Claim 1, as well as the additional elements identified in Claim 2 itself.

2.3.3 Construction of the Claims

It is my job as Judge to determine what the patent claims mean and to instruct you about that meaning. You must accept the meanings I give you and use them when you decide whether or not any claim is infringed, and whether or not any claim is invalid.

With respect to the '304 Patent, I have determined the following meanings for terms in the claims:

- **“common static price axis”** means “a line comprising price levels that do not change positions unless a manual re-centering command is received and where the line of prices corresponds to at least one bid value and one ask value.”
 - Regarding the **“line of prices,”** orientation of the axis is irrelevant. It can be horizontal, vertical or angled.
 - Regarding **“common,” “corresponding to,”** and **“aligned,”** these are all synonyms for the phrase “visually or graphically in relationship with.”
- **“dynamically displaying”** means “updating the first (second) indicator in response to new market information such that the first (second) indicator changes positions relative to the common static price axis when the market changes.”
- **“displaying the bid and ask display regions”** means “a display of one or more bids and one or more asks.”

With respect to the '132 Patent, I have determined the following meanings for terms in the claims:

- **“static display of prices”** means “a display of prices comprising price levels that do not change positions unless a manual re-centering command is received.”
- **“dynamic display”** means “a display of a plurality of bids and asks that are updated in response to new market information such that the bids and asks change positions relative to the static display of prices when the market changes.”
- **“display of a plurality of bids and a plurality of asks”** means “a display of one or more bids and one or more asks. The display of a plurality of bids and a plurality of asks is not limited to a single window.”

The following claim terms apply to both patents:

- **“order entry region”** means “an area comprising a plurality of locations where users may enter commands to send trade orders, and that each location corresponds to a price level along the common static price axis.” This refers to “a location within the trading display where a user sends and not simply initiates an order.”
- I have found that the term “order entry region” should be viewed from the perspective of the user.

- **“parameter”** means “an element of a trade order, including, but not limited to, quantity, price, type of order and the identity of the commodity.”
- **“single action of a user input device”** means “an action by a user within a short period of time that may comprise one or more clicks of a mouse button or other input device.”
- TT’s patents were written from the perspective of the user. I have therefore determined that this phrase refers to a single action by a user, not the action or actions the computer performs to execute the user’s command.
- **“trade order”** means “a single, electronic message in executable form that includes at least all required parameters of a desired trade.”
- **“price level”** means “a level on which a designated price or price representation resides.”
- **“indicator”** means “something that indicates.”

For the Asserted Claims, the words “the” and “said” when used in the claims of a patent always refer to an element previously described in that claim or in another claim from which the claim at issue depends.

Returning to my example of the four-legged chair, independent claim 1 may claim a chair having four legs and a seat. Dependent claim 2 may then claim the chair of claim 1 wherein the seat is made of wood.

You should give the rest of the words in the claims their ordinary meaning in the context of the patent specification and prosecution history.

2.4 Patent Infringement Generally

I will now instruct you as to the rules you must follow when deciding whether TT has proven that Defendants infringed the Asserted Claims.

Patent law gives the owner of a patent the right to exclude others from importing, making, using, offering to sell, or selling the patented invention within the United States during the term of the patent. Any person or business entity that has engaged in any of those acts without the patent owner's permission infringes the patent. Here TT alleges that Defendants directly or indirectly infringed the following claims: Claims 1, 2, 7, 14, 15, 20, 23, 24, 25, 27, 28, 40, 45, 47, 48, 50 and 52 of the '132 Patent and Claims 1, 11, 14, 15 and 26 of the '304 Patent.

You have heard evidence about the Accused Products and TT's "MD Trader" product. However, in deciding the issue of infringement you are not to compare the Accused Products to MD Trader. Rather, you must compare the Accused Products to the Asserted Claims when making your decision regarding infringement.

TT bears the burden of proving infringement by a preponderance of the evidence.

2.4.1 Infringement

Infringement – Literal Infringement

To determine literal infringement, you must compare the Accused Products with each Asserted Claim, using my instructions as to the meaning of the terms in the Asserted Claims.

An Asserted Claim is literally infringed only if an Accused Product includes each and every element or method step in that claim. If the Accused Product does not contain one or more elements or method steps recited in an Asserted Claim, the Accused Product does not literally infringe that claim. You must determine literal infringement with respect to each Asserted Claim individually.

If an independent claim is not infringed, then any dependent claims that depend on that independent claim cannot be infringed, and you need not consider the dependent claims for purposes of infringement. On the Verdict Sheet, independent claims are listed in boldface type, and dependent claims in regular type.

2.4.2 Direct Infringement

To decide whether eSpeed directly infringes an asserted claim of the 304 or the 132 Patent, you must compare each Accused Product with each Asserted claim. In the '304 patent, claims 14, 15, 40, 45, 47, 48, and 52 are product claims, and the remaining Asserted Claims of both patents are method claims. To directly infringe a patent claim, eSpeed and Ecco by itself must make, use, sell, or offer for sale a product containing each and every element of an Asserted product Claim or must practice each and every step of an Asserted method Claim.

Direct infringement by eSpeed and Ecco themselves does not require proof of intent, because someone can directly infringe a patent without knowing that what they are doing is an infringement of the patent. The law is different for indirect infringement, and I will explain next the standard for indirect infringement.

Inducing Infringement

In order to induce infringement, there must first be an act of direct infringement by an entity or person other than the defendants, and proof that the defendants knowingly induced infringement with the intent to encourage the infringement. The defendants must have intended to cause the acts that constitute direct infringement and must have known or should have known that their actions would cause the direct infringement.

Direct infringement by the entity or person other than the defendants does not require proof of intent, because someone can directly infringe a patent without knowing that what they are doing is an infringement of the patent.

Contributory Infringement

TT asserts that eSpeed has contributed to another's infringement. To show contributory infringement, TT has the burden to prove that it is more likely than not that there was contributory infringement.

It is not necessary to show that eSpeed has directly infringed as long as you find that someone has directly infringed. If there is no direct infringement by anyone, TT has not contributed to the infringement of the patent. If you find someone has directly infringed the TT patents, then contributory infringement exists if:

- (1) eSpeed sold or supplied;
- (2) a material component of the patented invention that is not a staple article of commerce capable of substantial noninfringing use;
- (3) with knowledge that the component was especially made or adapted for use in an infringing system or method.

A "staple article of commerce capable of substantial noninfringing use" is something that has uses other than in the patented product or method, and those other uses are not occasional, farfetched, impractical, experimental, or hypothetical.

2.3.2 “Comprising” Claims

The beginning portion, or preamble, of many of the patent claims use the word “comprising.” “Comprising” means “including” or “containing.” A claim that uses the word “comprising” or “comprises” is not limited to products having only the claimed elements or methods having only the steps that are recited in the claim, but also covers products with extra features and methods that add additional steps.

Thus there can be infringement or invalidity of a claim containing “comprising” language even if the product or method to which the claims are compared contains additional features or steps beyond those claimed in the patent, so long as each of the claimed elements is present.

Returning to my example of the 4-legged chair, if a claim calls for “A chair comprising 4 legs,” then a chair having five legs would fall within the scope of the claim. Additional features are not relevant in assessing whether there the claims using “comprising” language are fulfilled.

3. Validity

3.1 Validity in General

eSpeed contends that Asserted Claims are invalid for the following reasons:

1. The invention was anticipated by the prior art because one prior art reference contained all of the elements of an Asserted Claim, or

2. The invention would have been obvious to one of ordinary skill in the art at the time the invention was made.

Each claim must be considered separately. The patents are presumed to be valid. eSpeed bears the burden of proving invalidity. This means that eSpeed must first prove by clear and convincing evidence what constitutes prior art in this case. Then, eSpeed must prove by clear and convincing evidence whether any patent claim is invalid in view of the prior art. If you find that an independent claim is invalid, you must still consider the validity of each dependent claim separately. If you find that an independent claim is valid, then all claims depending from that claim are also valid.

I will now instruct you in more detail about these invalidity issues. On the Verdict Sheet you will find, for each of these issues, the specific Asserted Claims that Defendants contend are invalid for these reasons.

3.2 Corroboration Required

eSpeed must corroborate any oral testimony of alleged prior art claiming patent invalidity. eSpeed can provide such corroboration by (1) the testimony of a disinterested witness or (2) contemporaneous documents supporting the oral testimony. The oral testimony of an interested witness can serve to authenticate evidence, but cannot act as sufficient corroboration for another interested witness' testimony.

Interested witnesses include parties interested in the outcome of the litigation, such as an employee of a member of the joint defense agreement.

3.3 Priority Date

The parties dispute what the correct priority date is for the patents in suit.

TT contends that the correct priority date is March 2, 2000, because that is the date it filed the Provisional Application. eSpeed contends that the correct priority date is June 9, 2000, because that is the date TT filed the Non-Provisional Application that resulted in the patents in suit. To decide the correct priority date, you must decide whether or not the Provisional Application provided support for the term "single action of a user input device," which is an element of all of the Asserted Claims.

eSpeed bears the burden of establishing lack of support by clear and convincing evidence. To provide adequate support you must find that the Provisional Application shows that one reasonably skilled in the art, reading the Provisional Application that explicitly calls for "single click" user entry, would have known that the patentee had possession of a broader "single action of a user input device." In other words, one skilled in the art, reading the Provisional Application, would understand from the disclosure of "single click" that any "single action of a user input device" as I have defined the term for you could be used. It is not required that the exact words of the claims appear in the Provisional Application.

The priority date is also the date used to determine if something is prior art. I will now define the term prior art for this case.

3.4 Prior Art Defined

Prior art includes any of the following items received into evidence during trial:

1. any product or method that was publicly known or used by others in the United States before the patented inventions were made;

2. patents that issued more than one year before the priority date of the patents in suit or before the inventions were made;

3. publications having a date more than one year before the priority date of the patents in suit or before the inventions were made; and

4. any product or method that was in public use, offered for sale, or sold in the United States more than one year before the priority date.

eSpeed bears the burden of proving by clear and convincing evidence that a particular item qualifies as prior art.

There are additional requirements with particular types of prior art, and I will describe those for you now.

3.5 Prior Art – Prior Public Use or Knowledge

A system or method that was publicly used in the United States more than one year before the priority date for the patents in suit qualifies as prior art. eSpeed bears the burden of proving such use by clear and convincing evidence.

A commercial use satisfies the public use requirement, but a commercial use that was primarily experimental by the seller does not.

Secret use by a third party is not a public use, but may as I will later instruct you be considered for purposes of obviousness.

Note that companies do not always keep all material related to a prior art system, and there is no obligation or requirement that someone keeps all materials related to a prior art system.

3.6 Prior Art – Prior Sale

A system or method that was sold or offered for sale by one person or company to another, more than one year before the priority date for the patents in suit, qualifies as prior art.

A system or method is “on sale” if it was both (1) subject to commercial offer for sale in the United States; and (2) ready for patenting more than one year before the patent application date.

It is not required that a sale was actually made, because an offer for sale does not have to be accepted to implicate the on sale bar. Also, it is not necessary that a delivery took place for the product that was sold or on sale. The essential question is whether or not there was an attempt to obtain commercial benefit. To qualify as a prior sale or offer for sale, and if not expressly mentioned in the contract, then the prior art must have been actually disclosed or delivered as part of the commercial transaction. For disclosures or delivery after the date of the contract, they qualify as prior art as of the date of such disclosure or delivery.

To qualify as prior art, the sale or offer for sale must be “commercial.” A sale is a commercial offer for sale if (a) the offer or sale is one in which the party being offered the product could create a binding contract by simply accepting the offer, and (b) the circumstances surrounding the transaction show that the transaction was not primarily for purposes of experimentation by the seller.

In order to qualify as prior art, the invention offered for sale must also have been ready for patenting. A claimed invention is ready for patenting either when an actual product exists or when there is sufficient available information for one of ordinary skill in the art to make an actual product.

3.7 Prior Art – Prior Publication

Publications from anywhere in the world are prior art if the publications were published, either before the inventor invented the claimed invention or more than one year before the priority date.

A publication must be reasonably accessible to those members of the public who would be interested in its contents. It is not necessary that the printed publication be available to every member of the public. The information must, however, have been maintained in some form such as printed pages, magnetic tape, computer records, or photocopies, among other possible records.

For a publication to anticipate a patent claim, it must, when read by a person of ordinary skill in the art, expressly or inherently disclose each element of the claimed invention to the reader. The disclosure must be complete enough to enable one of ordinary skill in the art to practice the invention without undue experimentation. In determining whether the disclosure is enabling, you should take into account what would have been within the knowledge of a person of ordinary skill in the art at the time of the claimed invention, and you may consider evidence that sheds light on the knowledge such a person would have had.

Documents maintained in secret are not publications. The fact that a document is marked “confidential” is not necessarily determinative; there must have been a reasonable likelihood that the document will remain confidential.

3.8 Anticipation

To anticipate a claim, each and every element in the claim must be present in a single item of prior art. You may not combine two or more items of prior art to prove anticipation. In determining whether every one of the elements of the claimed invention is found in the prior art, you should take into account what a person of ordinary skill in the art would have understood from his or her examination of the particular prior art reference.

A person cannot obtain a patent if someone else already has made an identical invention. Simply put, the invention must be new. An invention that is not new or novel is said to be "anticipated by the prior art." Under the United States patent laws, an invention that is "anticipated" is not entitled to patent protection. To prove anticipation, eSpeed must present clear and convincing evidence showing that the claimed invention is not new.

A printed publication will not anticipate a patent claim unless it contains a description of the claimed invention that is sufficiently detailed to teach a skilled person how to make and use the invention without undue experimentation. In other words, a person skilled in the field of the invention reading the printed publication or patent must be able to make and use the invention using only an amount of experimentation that is appropriate for the complexity of the field of the invention and for the level of expertise and knowledge of persons skilled in that field.

For foreign prior publications, only the documents themselves qualify as prior art. I have already instructed you about corroborating oral testimony.

eSpeed contends that GL TradePad and Midas-Kapiti anticipate at least some of the Asserted Claims. The Verdict Form will reflect the claims at issue that eSpeed contends are anticipated. The parties dispute whether GL TradePad and Midas-Kapiti are prior art.

In determining whether the single item of prior art anticipates a patent claim, you should take into consideration not only what is expressly disclosed in the particular item of prior art, but also what inherently occurred as a natural result of its practice. A party claiming inherency must prove it by clear and convincing evidence. This is called "inherency." Inherent anticipation does not require that a person of ordinary skill in the art at the time would have recognized the inherent disclosure. Thus, the prior use of the patented invention that was accidental, or unrecognized and unappreciated can still be an invalidating anticipation.

You must keep these requirements in mind and apply them to each kind of anticipation you consider in this case.

3.9 Obviousness

eSpeed also contends that one or more of the Asserted Claims are invalid because the claimed subject matter would have been obvious to one of ordinary skill in the art at the time the invention was made. eSpeed bears the burden of proving this defense by clear and convincing evidence. Each claim must be considered separately.

As I explained before, to find anticipation, it is required that every one of the elements of the claimed invention be found in a single item of prior art. However, obviousness is different. For obviousness, one reference does not need to contain all of the elements of an Asserted Claim, and a person of ordinary skill in the art may combine two or more items of prior art or use his or her own personal skill. Therefore, you must consider the prior art reference(s) and evaluate obviousness from the perspective of one of ordinary skill in the art at the time the invention was made (not from the perspective of a layman or a genius in the art).

Before determining whether or not eSpeed has established obviousness of the claimed invention, you must determine the following factual matters, each of which must be established by clear and convincing evidence:

1. The scope and content of the prior art;
2. The difference or differences, if any, between each claim and the prior art; and
3. The level of ordinary skill in the art at the time the invention.
4. You also must consider what are referred to as secondary considerations of non-obviousness. TT bears the burden of proof to establish secondary considerations that tend to prove non-obviousness.

I will now explain each of these more fully.

3.9.1 The Scope and Content of the Prior Art

Determining the scope and content of the prior art means that you should determine what qualifies as prior art, and what is disclosed in any references that eSpeed has proven by clear and convincing evidence to be prior art.

3.9.2 Differences Between the Invention of the Claims and the Prior Art

In reaching your conclusion as to whether or not the claimed invention would have been obvious, you should consider any difference or differences between the prior art and the claimed invention. When doing so, each claim must be considered in its entirety and separately from the other claims.

Although you should consider any differences between the claimed invention and the prior art, you must still determine the obviousness or nonobviousness of the entirety of the invention, not merely some portion of it.

3.9.3 Level of Ordinary Skill

In reaching your determination as to whether or not the claimed invention would have been obvious, you should consider the level of ordinary skill in the pertinent art. When determining the level of ordinary skill in the art, you should consider all the evidence submitted by the parties to show:

1. the level of education and experience of persons actively working in the field at the time of the invention;
2. the types of problems encountered in the art at the time of the invention;
3. the prior art patents and publications;
4. the activities of others;
5. prior art solutions to the problems; and
6. the sophistication of the technology.

Based on the factors listed and the evidence presented, you must determine the level of ordinary skill in the art at the time of the invention.

The person of ordinary skill in the art is not an innovator or a genius in the field. A person of ordinary skill in the art is also a person of ordinary creativity, not an automaton.

This person is presumed to know all of the prior art, not just what the inventor may have known. This person is also entitled to rely on his own background and knowledge. When faced with a problem, this person of ordinary skill is entitled to apply his or her experience and ability to the problem and also to look to any available prior art to help solve the problem.

When you decide the issue of obviousness, you must decide whether or not the invention would have been obvious to one having this ordinary level of skill in the pertinent art field.

Secondary Considerations

As part of your obviousness determination, you must consider the secondary considerations of non-obviousness. TT has the burden to establish any secondary considerations, and to show that the secondary considerations are caused by the combination of features covered by the Asserted Claims, and not for other reasons not covered by the claims. These secondary considerations are useful to evaluate close cases, but do not control the obviousness decision.

Commercial Success

One of the factors you should consider is whether TT has shown any commercial success of products covered by the patents-in-suit due to the merits of the invention. To prove this, TT would have to provide evidence to satisfy you that there is a causal connection between the commercial success of the products and the combination of claimed features in the Asserted Claims, which would tend to indicate that the invention would not have been obvious.

However, if you conclude that commercial success of the product is due to advertising, promotion, salesmanship or the like, or to features of the product other than those claimed in the patents-in-suit, rather than to the claimed invention, then the fact that the product enjoyed commercial success is not related to whether the invention would have been nonobvious.

Failure to Solve

Another factor you should consider is whether TT has shown that others had tried, but failed, to solve the problem solved by the invention of the patents-in-suit, which would tend to indicate that the invention would not have been obvious. It is not considered a failure of others if the claimed invention already existed in the prior art, but the benefits of the claimed features were not appreciated until later.

Copying

Another of the factors you should consider is whether or not TT has shown copying by others of the combination of features claimed in the patents-in-suit. If you were to find that others copied the invention because of its merits, this would tend to indicate that the invention would not have been obvious.

Acceptance of Licenses

Another of the factors you should consider is whether or not TT has shown that others have accepted licenses under the patents-in-suit because of the merits of the claimed invention. If others accepted licenses due to factors such as the cost of litigation or the low cost of the license, among other factors, then it has not been established that the acceptance of licenses was due to the merits of the invention itself. If you were to find that others took licenses as a result of the claimed invention, however, this would tend to indicate that the invention would not have been obvious.

Initial skepticism by others

Another factor you should consider is whether or not TT has proven that others in the field were skeptical of the invention due to the claimed features. Evidence of such skepticism would tend to indicate that the invention was not obvious.

Unexpected results achieved by the invention

One of the factors you should consider is whether or not TT has shown unexpected superior results achieved by the invention claimed in the asserted patents. To prove this, TT must show that it was the patented invention that caused the unexpected results, which would tend to indicate that the invention would not have been obvious. If there were not unexpected superior results or if the unexpected results were due to a feature unrelated to the invention, then TT would not have carried its burden of proof on this factor.

Praise of the invention by the infringer or others in the field

Another factor you should consider is whether TT has proven that the infringer or others in the field praised the invention. TT must show that such praise was related to the claimed features of the invention. If you find that there was praise of the invention related to the claimed elements, this would tend to indicate that the invention was not obvious.

Independent Invention by Others

In reaching your determination on the issue of obviousness, you should also consider whether or not the claimed invention was invented independently by other persons, either before it was invented by the inventors or at about the same time. Independent making of the invention by persons other than the inventor at about the same time may be evidence that the invention would have been obvious, depending on the circumstances. Independent invention by others at about the same time need not rise to the status of prior art. It is whether there was independent invention that is relevant.

3.9.5 Determination of Obviousness

In determining whether any claim would have been obvious to a person of ordinary skill in the art, you must presume that person would have been familiar with all of the prior art and would pursue all known options within his or her technical grasp. Combinations of elements present in the prior art may be obvious. While the combination of familiar elements according to known methods is likely to be obvious when it does nothing more than yield predictable results, if the elements work together in an unexpected and fruitful manner, that may support a conclusion of non-obviousness.

In deciding obviousness, you must avoid using hindsight; that is, you should not consider what is known today or what was learned from the teachings of the patent. You should not use the patent as a roadmap for selecting and combining items of prior art. In many cases a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle.

One way in which a patent claim may be found to be obvious is if there existed at the time of the invention a known problem for which there was a known and obvious solution encompassed by the patent claims.

When a patent simply arranges old elements with each performing the same function it had been known to perform and yields no more than one would expect from such an arrangement, the combination is obvious. When there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense. You may use common sense to determine whether or not an invention was obvious, especially when there are a limited number of solutions that work in predictable ways.

4. Damages

Damages – Generally

If you find that the Accused Products infringe any of the claims of the '132 Patent or the '304 Patent, and that these claims are not invalid, you must determine the amount of damages to be awarded TT for the infringement. The amount of those damages must be adequate to compensate TT for the infringement. Your damage award should put TT in approximately the financial position it would have been in had the infringement not occurred; but, in no event may the damage award be less than a reasonable royalty. You must consider the amount of injury suffered by TT without regard to the Defendants' gain or losses from the infringement. You may not add anything to the amount of damages to punish the accused infringer or to set an example.

TT has the burden of proving each element of its damages by a preponderance of the evidence.

The fact that I am instructing you as to the proper measure of damages should not be construed as intimating any view of the Court as to which party is entitled to prevail in this case. Instructions as to the measure of damages are given for your guidance in the event you find the evidence in favor of TT.

In general, the amount of the damages need not be proven with mathematical precision. Where the number of infringing trades cannot be determined with exactness, damages may be estimated on the best available evidence.

4.2 Notice Requirement

TT can recover damages for infringement that occurred only after TT gave notice of its patent rights. It is TT's burden to prove by a preponderance of the evidence that it gave notice.

TT can give notice in two ways. The first way is to give notice to the public in general. TT can do this by marking its software by placing the numbers of the 304 or 132 patents on substantially all the products it sold that included the patented invention. This type of notice is effective from the date TT began to mark substantially all of its products that use the patented invention with the patent number. If TT did not mark substantially all of its products that use the patented invention with the patent number, then TT did not provide notice in this way. To rely on proof of notice by patent marking, TT must also prove that all licensees of the patented invention also marked all the products they used or sold that included the patented invention. With respect to marking by TT's licensees you must apply a "rule of reason" approach, and determine whether TT made reasonable efforts to assure compliance with the marking requirements by its licensees.

A second way TT can provide notice of its patent is to tell eSpeed and Ecco that they were infringing claims of the 304 or 132 Patent and to identify the specific products accused of infringing. This type of notice is effective from the time it is given. Filing a lawsuit for patent infringement is a manner of providing notice as of the date of the lawsuit. The notice requirements must be satisfied separately as to eSpeed and Ecco and their products. Damages cannot be recovered until the notice requirements were met.

4.3 Reasonable Royalty

TT is asking for damages in the amount of a reasonable royalty. Generally, a reasonable royalty is defined by the patent laws as the reasonable amount that someone wanting to use the patented invention should expect to pay the patent owner and the patent owner should expect to receive.

If you determine that eSpeed has infringed any claim of the 304 or 132 Patent that is not invalid, you should determine what a reasonable royalty to compensate TT would be.

A reasonable royalty is the royalty that would have resulted from a hypothetical negotiation between TT and eSpeed taking place at or around the time the alleged infringement began. You must assume the parties were willing to enter into an agreement and that they acted reasonably in their negotiations. You must also assume that the parties believed that the patent was valid and infringed at the time of the negotiation. Your role is to determine what that agreement would have been.

In deciding what a reasonable royalty is, you may consider the factors that TT and eSpeed would consider. I will list for you a number of factors you may consider. This is not every possible factor, but it will give you an idea of the kinds of things to consider in setting a reasonable royalty.

1. Any royalties received by TT for the licensing of the patents-in-suit, proving or tending to prove an established royalty.
2. Royalties paid by eSpeed for patents comparable to the 304 and 132 Patent.
3. The nature and scope of the license, such as whether it is exclusive or non-exclusive, restricted or non-restricted in terms of territory or country.
4. Whether or not TT had a policy of licensing or not licensing the 304 and 132 patent.
5. Whether or not TT and eSpeed are competitors, and the nature of the competition.
6. The effect of selling the patented product in promoting sales of other products of eSpeed; the existing value of the invention to TT as a generator of sales of its non-patented items; and the extent of such collateral sales.
7. The duration of the patent and the term of the license.
8. The profitability of the product made using the 304 or 132 patent, and whether or not it is commercially successful or popular.
9. The advantages and benefits of using the patented invention over other products or methods not covered by the 304 or 132 Patent.

10. The nature of the patented invention and the benefits to those who used it.
11. The extent of eSpeed's use of the patented invention and the value of that use to eSpeed.
12. Whether or not there is a portion or percentage of the profit or selling price that is customarily paid for use of patented inventions comparable to the inventions claimed in the 304 or 132 Patent.
13. The portion of the profit that is due to the patented invention, as compared to the portion of the profit due to other factors, such as unpatented elements or unpatented manufacturing processes, or features or improvements developed by eSpeed.
14. Expert opinions as to what a reasonable royalty would be.
15. The amount that TT and eSpeed would have agreed upon (at the time the infringement began) if both sides had been reasonably and voluntarily trying to reach an agreement; that is, the amount which a prudent licensee—who desired, as a business proposition, to obtain a license to manufacture and sell a particular article embodying the patented invention—would have been willing to pay as a royalty and yet be able to make a reasonable profit and which amount would have been acceptable by a patentee who was willing to grant a license.
16. Any other economic factor that a normally prudent business person would, under similar circumstances, take into consideration in negotiating the hypothetical license.

5. Willful Infringement

If you find that eSpeed did not infringe, or that the Asserted Claims are invalid, then you need not address willful infringement. If you find that TT proved eSpeed infringed, either directly or indirectly, then you must further determine if the infringement was willful. TT must prove willfulness by clear and convincing evidence. Willfulness requires objective proof of reckless disregard of an issued patent.

To prove willfulness, TT must show two things. First, TT must show that eSpeed acted despite an objectively high likelihood that eSpeed's actions constituted infringement of valid patents. In carrying out this objective inquiry, one factor that you may consider is whether eSpeed acted within the standards of fair commerce. Second, TT must also show that eSpeed subjectively acted to infringe an issued patent, despite knowing that its actions constituted infringement of valid patents. eSpeed's state of mind must focus on eSpeed's intent after the patents in suit actually issued.

One can only infringe an issued patent, not a patent application. There is no duty to monitor patent applications pending at the Patent Office. eSpeed cannot have willfully infringed a patent at any time before the patents in suit issued.

In analyzing willfulness, you must consider the totality of the circumstances. As part of the totality of the circumstances, you may consider evidence of copying a product even if the copying occurred before issuance of the patents-in-suit, if TT demonstrates that eSpeed and/or Ecco had knowledge of the TT patent applications and that the copying was egregious. Unless TT shows both objectively and subjectively that eSpeed acted in reckless disregard of an issued patent, eSpeed cannot be found to have willfully infringed.

6.0 Final Instruction

Upon retiring to the jury room, you will select one jury member to act as your foreperson. The foreperson will preside over your deliberations, and will be your spokesperson here in court. Verdict forms have been prepared for your use.

You will take these forms to the jury room and, when you have reached unanimous agreement as to your verdict, you will have your foreperson fill in and date and each of you will sign the form that sets forth the verdict upon which you unanimously agree; and then return with your verdict to the courtroom.

I do not anticipate that you will need to communicate with me. If you do need to communicate with me, the only proper way is in writing. The writing must be signed by the presiding juror, or if he or she is unwilling to do so, by some other juror. The writing should be given to a courtroom representative, who will give it to me. I will respond either in writing or by having you return to the courtroom so that I can respond orally.

The verdict must represent the considered judgment of each juror. Your verdict, whether it is for the plaintiff or defendant, must be unanimous.

You should make every reasonable effort to reach a verdict. In doing so, you should consult with one another, express your own views, and listen to the opinions of your fellow jurors. Discuss your differences with an open mind. Do not hesitate to reexamine your own views and change your opinion if you come to believe it is wrong. But you should not surrender your honest beliefs about the weight or effect of evidence solely because of the opinions of your fellow jurors or for the purpose of returning a unanimous verdict.

All nine of you should give fair and equal consideration to all the evidence and deliberate with the goal of reaching an agreement that is consistent with the individual judgment of each juror.

You are impartial judges of the facts.

Exhibit J

FILED UNDER SEAL

IN THE UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION

TRADING TECHNOLOGIES
INTERNATIONAL, INC.,

Plaintiff,

Civil Action No.
No. 05-CV-4811

vs.

CQG, INC., and CQGT, LLC,

Defendants.

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

VIDEOTAPED DEPOSITION OF
JOHN PHILLIP MELLOR, Ph.D.
Chicago, Illinois
Friday, April 25, 2014
9:18 a.m.

Reported by:

Cheryl L. Sandeck, CSR, RPR

Ref. No.: 11663

Page 2

1 APPEARANCES:
2
3 McDONNELL BOEHNEN HULBERT & BERGHOFF LLP, by
4 MR. MATTHEW J. SAMPSON, ESQ.
5 300 South Wacker Drive
6 Chicago, Illinois 60606
7 (312) 913-0001
8 sampson@mbhb.com
9 Representing the Plaintiff;
10
11 LOEB & LOEB LLP, by
12 MR. WILLIAM J. VOLLER III, ESQ.
13 MR. ADAM G. KELLY, ESQ.
14 321 North Clark Street
15 Suite 2300
16 Chicago, Illinois 60654
17 (312) 464-3100
18 wvoller@loeb.com
19 akelly@loeb.com
20 Representing the Defendants.
21
22 ALSO PRESENT: Mr. Steve Borsand
23 Mr. Jean-Louis Ziesch,
24 Videographer
25

Page 3

1
2 April 25, 2014
3 9:18 a.m.
4
5
6
7
8 The videotaped deposition of JOHN PHILLIP
9 MELLOR, Ph.D., called for examination pursuant
10 to the Rules of Civil Procedure for the United
11 States District Courts pertaining to the taking
12 of depositions, taken before CHERYL L. SANDECKI,
13 Certified Shorthand Reporter for the State of
14 Illinois, at 300 South Wacker Drive, Chicago,
15 Illinois, on April 25, 2014, at the hour of 9:18
16 o'clock a.m.
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18
19
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25

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1 JOHN PHILLIP MELLOR, Ph.D.
2 THE VIDEOGRAPHER: This is Tape No. 1 of the
3 videotaped deposition of Dr. Mellor in the
4 matter of Trading Technologies International
5 versus CQG and CQGT, et al., in the U.S.
6 District Court, Northern District of Illinois,
7 Eastern Division, Case No. 05-CV-4811.
8 This deposition is being held at
9 300 South Wacker Drive in Chicago, Illinois, on
10 April 25th, 2014, at 9:18 a.m.
11 My name is Jean-Louis from the firm of
12 TransPerfect, and I am the certified legal video
13 specialist. The court reporter is Cheryl
14 Sandecki in association with TransPerfect.
15 Will counsel please identify yourself.
16 MR. SAMPSON: Good morning, Dr. Mellor. My
17 name is Matt Sampson. I'm from the firm of
18 McDonnell, Boehnen, Hulbert & Bergoff. I
19 represent the plaintiff, Trading Technologies,
20 and with me today is Steve Borsand, who is the
21 in-house attorney from Trading Technologies.
22 MR. VOLLER: Good morning. This is Bill
23 Voller from the law firm of Loeb & Loeb. I
24 represent the defendants, CQG and CQGT. With me
25 is Adam Kelly, also of Loeb & Loeb.

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1 JOHN PHILLIP MELLOR, Ph.D.
2 THE VIDEOGRAPHER: Will the court reporter
3 please swear in the witness.
4 (Witness administered an oath.)
5 JOHN PHILLIP MELLOR, Ph.D.,
6 having been first administered an oath, was
7 examined and testified as follows:
8 EXAMINATION
9 BY MR. SAMPSON:
10 Q. Good morning. Could you please state
11 your full name for the record?
12 A. My name is John Phillip Mellor.
13 Q. And how do you spell your last name?
14 A. M-e-l-l-o-r.
15 Q. And could you give us your home
16 address, please?
17 A. I live at 106 Country Club Road in
18 Terre Haute, Indiana.
19 Q. Is there anything that would prevent
20 you from testifying truthfully and accurately
21 today?
22 A. Not to my knowledge.
23 Q. Have you been deposed before?
24 A. I have.
25 Q. How many times?

Page 7

1 JOHN PHILLIP MELLOR, Ph.D.
2 A. Three times, I believe.
3 Q. Okay. I'll just go over a couple basic
4 ground rules. So I will ask questions.
5 You have to answer verbally because the written
6 transcript is the official record of the
7 deposition.
8 Do you understand that?
9 A. I do.
10 Q. Okay. If you could let me finish my
11 questions before you answer, even if you know
12 where I'm going with my question, I would
13 appreciate it because that will prevent
14 confusion on the record. Okay?
15 A. I'll do my best with that.
16 Q. And if you don't understand a question
17 that I'm asking, can you agree to ask me for a
18 clarification?
19 A. I'll do my best to ask for
20 clarification.
21 Q. Great. Thank you.
22 I'm going to mark as PDX 2360 the
23 notice of deposition.
24
25

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1 JOHN PHILLIP MELLOR, Ph.D.
2 (Whereupon, PDX Deposition
3 Exhibit 2360 was marked for
4 identification.)
5 BY MR. SAMPSON:
6 Q. Dr. Mellor, have you seen this document
7 before?
8 A. I have.
9 Q. Okay. And are you here today to
10 provide testimony pursuant to this deposition?
11 A. I am.
12 Q. Okay. Tell me where you're currently
13 employed.
14 A. I'm employed at Rose-Hulman Institute
15 of Technology.
16 Q. And what is your position at
17 Rose-Hulman Institute of Technology?
18 A. I'm a professor of computer science and
19 software engineering in the computer science and
20 software engineering department.
21 Q. How long have you been employed in that
22 role at Rose-Hulman?
23 A. I've been employed at Rose-Hulman for
24 15 years.
25 Q. Okay. And have you always been a

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1 JOHN PHILLIP MELLOR, Ph.D.
2 professor of computer science and engineering at
3 Rose-Hulman?
4 A. Let's see. I started off as an
5 assistant professor and over the years was
6 promoted to the rank of full professor. When I
7 first started working for Rose-Hulman, we didn't
8 have an engineering degree, and that was
9 added -- we worked on that and added that
10 shortly after I arrived at -- at Rose.
11 Q. Okay.
12 A. So the title changed a little bit as --
13 as the department and the degrees changed.
14 Q. And we'll get into a little bit more of
15 the chronology of your work. We'll go over your
16 CV next, so we'll get into some of those
17 details.
18 But for right now, I just want to ask
19 you some general questions about Rose-Hulman.
20 Are there any affiliations between
21 Rose-Hulman and any of the parties in this case?
22 A. Not to my knowledge.
23 Q. Is there -- I noticed in -- I believe
24 it was in your report you made reference to a
25 student project that was sponsored or something

1 JOHN PHILLIP MELLOR, Ph.D.
 2 by the Chicago Mercantile Exchange; is that
 3 correct?
 4 A. That's correct.
 5 Q. Do you know what the relationship is
 6 between the Chicago Mercantile Exchange and
 7 Rose-Hulman?
 8 A. I'm not aware of any relationship
 9 besides saying that here's a project that we'd
 10 like, you know, students to work on for their
 11 senior project.
 12 Q. Okay. Are you aware of any funding or
 13 grant money that goes with that kind of project
 14 from the CME to Rose-Hulman?
 15 A. I don't believe that there was any --
 16 any transfer of funds. We don't -- we don't
 17 charge for our senior projects or anything like
 18 that.
 19 In -- in some unusual cases, if there's
 20 a particularly expensive piece of equipment or
 21 unusual piece of equipment that's needed to --
 22 to do the project, the sponsoring company may
 23 provide that piece of equipment on loan for
 24 the -- for the purposes of the project.
 25 Occasionally, the -- the sponsoring

1 JOHN PHILLIP MELLOR, Ph.D.
 2 (Whereupon, PDX Deposition
 3 Exhibit 2361 was marked for
 4 identification.)
 5 BY MR. SAMPSON:
 6 Q. This is -- this is a document that was
 7 Exhibit 1 to your declaration accompanying the
 8 defendant's motion for summary judgment. Can
 9 you review that and identify that document for
 10 us, please?
 11 A. This -- this is my CV.
 12 Q. Okay. And is -- is the CV complete and
 13 accurate?
 14 A. Since the time I filed my report,
 15 there's -- there's been one change. I've been
 16 able to -- on page six, I've been able to update
 17 that -- that first case. That has since
 18 settled. And I don't have the number -- the
 19 case number off the top of my head. But -- but
 20 I was able to update my CV and fill that
 21 information in.
 22 Q. Okay. Do you recall what extra
 23 information you provided? Because I think I've
 24 got a letter from Mr. Voller we can look at if
 25 that helps.

1 JOHN PHILLIP MELLOR, Ph.D.
 2 activity will bring the students that work on
 3 their project to their site to -- to sort of,
 4 you know, install the -- the piece of software
 5 or -- or discuss it with other, you know, folks
 6 in the company.
 7 But that -- as far as I know, that's
 8 it.
 9 Q. Okay. And with respect to that one
 10 sponsorship with the Chicago Mercantile
 11 Exchange, do you know if there -- is there an
 12 ongoing relationship, or is it just that one
 13 project?
 14 A. Well, there were two different projects
 15 in subsequent years.
 16 Q. Okay.
 17 A. To my knowledge, that's -- that's the
 18 only interaction that's happened with the
 19 Chicago Mercantile Exchange. To my knowledge,
 20 there wasn't any before and there hasn't been
 21 any since.
 22 Q. Okay. And -- okay. Why don't we move
 23 to the next exhibit I've marked as PDX 2361.
 24
 25

1 JOHN PHILLIP MELLOR, Ph.D.
 2 A. The parties and the case name and --
 3 Q. Okay.
 4 A. -- the case number. So I know it was,
 5 let's see, ROY-G-BIV versus Siemens -- Siemens
 6 Automation, and I think there was one other
 7 party on that. I don't remember the case
 8 number, and it was in the Eastern District of
 9 Texas.
 10 Q. Did you -- were you deposed in that
 11 case?
 12 A. I was not.
 13 Q. Did you provide an expert report in
 14 that case?
 15 A. I prepared an expert report. And it's
 16 my understanding that after I prepared that but
 17 before it was actually served on the defendants,
 18 the defendants settled.
 19 Q. Okay. And did the expert report -- you
 20 know what, strike that.
 21 I'm going to -- we'll come back to
 22 these specific expert engagements in a few
 23 minutes. I just want to run through some of the
 24 other stuff first. When we get to there, I'll
 25 ask you more details about that stuff, hopefully

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1 JOHN PHILLIP MELLOR, Ph.D.
2 in a coherent way that helps us to go through it
3 a little faster instead of one by one.
4 So you mentioned that you are a
5 professor at Rose-Hulman. Where did you get
6 your highest degree?
7 A. I received both a master's and a Ph.D.
8 in electrical engineering in computer science
9 from the Massachusetts Institute of Technology.
10 Q. Okay. And if I'm reviewing your CV
11 correctly, it looks like -- I'm looking for the
12 earliest date of -- of your employment at
13 Rose-Hulman. Is it November 1999?
14 A. That's correct.
15 Q. And have you been at Rose-Hulman
16 continuously since November of 1999?
17 A. That's correct.
18 Q. Okay. So -- okay.
19 And then turning in your CV to the
20 page -- it's -- you were referring to it before
21 -- CQG14190777 at the bottom page. It's the
22 industrial experience section. I notice that
23 you've identified, let's see here, it looks like
24 seven expert witness engagements; is that
25 correct?

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1 JOHN PHILLIP MELLOR, Ph.D.
2 A. I think I count six.
3 Q. I was looking. There's a -- there's a
4 Kirkland & Ellis one back on page 14190780.
5 A. Okay. Yeah.
6 Q. So that's seven, right?
7 A. Okay. I would agree.
8 Q. Okay. In your work as an expert
9 witness, have you ever provided analysis in the
10 field of electronic trading?
11 A. I have not.
12 Q. Okay. In your work as an expert
13 witness, have you ever provided opinions
14 relating to validity?
15 MR. VOLLER: Form.
16 THE WITNESS: I have not.
17 BY MR. SAMPSON:
18 Q. Okay. In this case you have provided
19 an opinion that generally relates to the written
20 description requirement, correct?
21 A. That's correct.
22 Q. Okay. Have you ever, in any of your
23 prior engagements as an expert witness, provided
24 an opinion relating to the written description
25 requirement?

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1 JOHN PHILLIP MELLOR, Ph.D.
2 A. I have not.
3 Q. Okay. And -- okay.
4 Tell me a little bit about how you came
5 to work with the law firm of Loeb & Loeb.
6 When did the -- when did they first
7 contact you?
8 A. I believe it was -- let me think. It
9 might have been two years ago. It's been a
10 while. So I'm a little -- a little hazy on
11 the -- on the details. Maybe it was last --
12 last -- about a year ago.
13 Q. Did you have a --
14 A. No. Two years. It was two years ago.
15 Q. I'm sorry. Okay. So you started two
16 years ago with -- working with Loeb & Loeb. And
17 who contacted you?
18 A. Bill Voller was the person that first
19 contacted me.
20 Q. And at that time, when Mr. Voller first
21 contacted you, were you -- did he mention to you
22 that he was going to ask you to prepare a
23 report?
24 A. I don't remember the specifics of the
25 exact conversation then.

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1 JOHN PHILLIP MELLOR, Ph.D.
2 Q. Okay.
3 A. He -- we talked a little bit, and he
4 described the case and -- and it sounded
5 interesting to me and -- and we sort of went
6 forward from there. But I don't remember the
7 specifics of exactly what he asked at that point
8 or -- or...
9 Q. Okay. Do you have a consulting
10 agreement or a contract of some sort with Loeb &
11 Loeb?
12 MR. VOLLER: Form.
13 THE WITNESS: I do.
14 BY MR. SAMPSON:
15 Q. Okay. And when was that signed?
16 A. I don't honestly remember the exact
17 date that was signed. I would imagine that it
18 was at some point over the summer of -- of 2012.
19 But I -- I don't remember exactly.
20 Q. Does the -- does your consulting
21 agreement identify what form of compensation you
22 are to receive for your time in this case?
23 MR. VOLLER: Form.
24 THE WITNESS: If -- if you mean that -- that
25 they pay me for the work that I do, then, yes,

1 JOHN PHILLIP MELLOR, Ph.D.
 2 it includes that.
 3 BY MR. SAMPSON:
 4 Q. Okay. So how does Loeb & Loeb pay you
 5 for the work that you do?
 6 A. I bill them for each hour of work that
 7 I do.
 8 Q. Okay. And is there an hourly rate
 9 that's associated with your work?
 10 A. There is. I -- I -- I charge \$225 an
 11 hour for the work that I do.
 12 Q. Okay. And can you estimate to this
 13 point in time how many hours of work you have
 14 done under the contract?
 15 A. Off the top of my head, that would be
 16 pretty -- pretty rough or -- or probably maybe
 17 even wrong. I certainly record that and keep --
 18 I try to keep pretty accurate records. But I
 19 don't -- that's not something I -- I carry
 20 around in my head.
 21 Q. Okay. Okay. In reviewing your CV, I
 22 don't see any experience in the field of
 23 electronic trading identified. Is that right?
 24 MR. VOLLER: Form.
 25 THE WITNESS: What do you mean by

1 JOHN PHILLIP MELLOR, Ph.D.
 2 a patent and you list some presentations and
 3 publications. Are any of the patents or
 4 presentations, publications, are those in the
 5 field of electronic trading?
 6 A. No, they are not.
 7 Q. Okay. When you -- can you just
 8 summarize for me your -- your -- let me think
 9 what I want to get from you here -- your
 10 education prior to the time that you began
 11 teaching at Rose-Hulman?
 12 A. Let me make sure I'm understanding what
 13 you're asking me.
 14 MR. VOLLER: Form.
 15 MR. SAMPSON: Yeah. Let me ask you a better
 16 question.
 17 BY MR. SAMPSON:
 18 Q. So I'm a little bit -- so you're -- you
 19 started at Rose-Hulman in August of 1999, is
 20 it -- November of 1999?
 21 A. That's correct.
 22 Q. Okay. So -- and your Ph.D. was awarded
 23 in February of 2000?
 24 A. That's -- well, yes, that's -- that's
 25 correct.

1 JOHN PHILLIP MELLOR, Ph.D.
 2 "experience"?
 3 BY MR. SAMPSON:
 4 Q. I don't see any education relating to
 5 the field of electronic trading identified.
 6 MR. VOLLER: Form.
 7 THE WITNESS: Not that I specifically listed,
 8 no.
 9 BY MR. SAMPSON:
 10 Q. Okay. Did you specifically list any
 11 teaching experience in the field of electronic
 12 trading?
 13 A. I did not.
 14 Q. Did you list any research experience in
 15 the field of electronic trading?
 16 A. I did not.
 17 Q. Did you list any industrial experience
 18 in the field of electronic trading?
 19 MR. VOLLER: Form.
 20 THE WITNESS: I didn't.
 21 BY MR. SAMPSON:
 22 Q. I'm sorry?
 23 A. I did not.
 24 Q. Okay. Thank you.
 25 I see you also have patent -- you have

1 JOHN PHILLIP MELLOR, Ph.D.
 2 Q. Okay. So let's just say prior -- let's
 3 focus on the time frame from 1995 to 2000.
 4 A. Okay.
 5 Q. During that time frame, you were at MIT
 6 the entire time?
 7 A. That's correct.
 8 Q. Okay. And you were pursuing a master's
 9 degree first in electrical engineering?
 10 A. That's correct, although I'd have to
 11 double-check the dates. But I think I may have
 12 completed my master's in '95.
 13 Q. Yeah, that's correct. Yeah, I'm just
 14 looking at the first page here of your CV. So
 15 your -- your master's looks like it was awarded
 16 in February of 1995; is that correct?
 17 A. That's correct.
 18 Q. So -- and then you continued on at
 19 Rose-Hulman -- I mean, strike that -- at the
 20 Massachusetts Institute of Technology until your
 21 Ph.D. was awarded in 2000, essentially; is that
 22 correct?
 23 A. Yeah, that's essentially correct. I --
 24 I finished my Ph.D., actually, in late September
 25 or October of '99. And then they -- MIT only

Page 22

1 JOHN PHILLIP MELLOR, Ph.D.
2 does graduation sort of three times a year.
3 Q. Okay.
4 A. So they have an August graduation, a
5 February graduation, and then I think it's May.
6 But I'm a little hazy on that.
7 And -- and so --
8 Q. The next one?
9 A. -- so the actual degree conferral date
10 matches up with the -- the graduation date that
11 they have sort of set on a -- on a cycle. But
12 I -- but I was done, everything was recorded,
13 you know, all the degree requirements were --
14 were finished --
15 Q. Okay.
16 A. -- back in September or October, before
17 I started at Rose.
18 Q. At any time in that time period between
19 1995 and 2000, were you working in the field of
20 electronic trading at all?
21 A. No.
22 Q. Okay. And did you have any experience
23 in the field of electronic trading in that time
24 frame from 1995 to 2000?
25 MR. VOLLER: Form.

Page 23

1 JOHN PHILLIP MELLOR, Ph.D.
2 THE WITNESS: Again, what do you -- what do
3 you -- I'm not sure I understand exactly what
4 you mean by "experience."
5 BY MR. SAMPSON:
6 Q. Well, before I was asking if you
7 worked --
8 A. Uh-huh.
9 Q. -- in that field. So I guess what I'm
10 asking besides working, did you -- did you
11 volunteer? Did you intern in that field? Did
12 you have some kind of formal study sequence in
13 the field of electronic trading during that 1995
14 to 2000 time frame?
15 MR. VOLLER: Form.
16 THE WITNESS: I -- I didn't intern or -- or
17 have a formal course of instruction in
18 electronic trading in that time period.
19 BY MR. SAMPSON:
20 Q. Okay. Okay. Other than your work in
21 connection with your engagement with Loeb &
22 Loeb, have you done any work over the last 15
23 years in the field of electronic trading?
24 MR. VOLLER: Form.
25 THE WITNESS: I'm not exactly clear what you

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1 JOHN PHILLIP MELLOR, Ph.D.
2 mean by "work." That's a pretty broad word.
3 BY MR. SAMPSON:
4 Q. Okay.
5 A. And I want to make sure I answer
6 correctly here.
7 Q. Have -- have you been employed -- how
8 about if we use that word instead of work? Have
9 you been employed in the field of electronic
10 trading?
11 A. I have not been directly employed by an
12 electronic trading firm or something like that.
13 Q. Okay. Have you done any formal
14 research in the field of electronic trading over
15 the last 15 years other than, you know, some
16 tasks that the Loeb & Loeb has asked you to
17 perform?
18 MR. VOLLER: Form.
19 THE WITNESS: Formal research is a pretty
20 broad category. I mean, maybe you consider the
21 two projects that the students worked on as
22 research. I'm not sure. So to the extent that
23 they may, I was loosely involved with those.
24 BY MR. SAMPSON:
25 Q. Okay. Is there anything else that you

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1 JOHN PHILLIP MELLOR, Ph.D.
2 can think of, other than the two projects that
3 the students were involved in, in the category
4 of research?
5 MR. VOLLER: Form.
6 THE WITNESS: Not that I -- that you would --
7 that I think most people would classify as
8 research, no.
9 BY MR. SAMPSON:
10 Q. Okay. Okay. That's fine.
11 Do you have -- do you have any
12 ownership interests in any party in this case?
13 A. I do not.
14 Q. Do you own any stock in the Chicago
15 Mercantile Exchange or -- or other Chicago
16 exchanges?
17 MR. VOLLER: Form.
18 THE WITNESS: I do not.
19 BY MR. SAMPSON:
20 Q. Have you ever done work as an expert
21 witness that is not identified on the CV for
22 some reason?
23 A. I don't believe so.
24 Q. Okay. So you don't feel like, oh, I --
25 I can't identify this because of secrecy issue

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1 JOHN PHILLIP MELLOR, Ph.D.
2 or something? You're not withholding any other
3 work as an expert witness?
4 A. No.
5 Q. Okay.
6 A. The -- the case we talked about before,
7 there -- there was a confidentiality as far
8 as --
9 Q. Right.
10 A. -- some limited confidentiality, and --
11 and that's why that entry was not as complete as
12 it now is.
13 Q. I understand. I understand.
14 A. But all the other cases either don't
15 have that or they've long since concluded and --
16 and then none of that matters.
17 Q. Okay. So just to wrap that issue up, I
18 just want to make sure there is nothing else, no
19 other engagements as an expert witness.
20 A. Not that I'm aware of.
21 Q. Okay. Okay.
22 Did you do anything to prepare for the
23 deposition today?
24 A. I did.
25 Q. Okay. What did you do?

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1 JOHN PHILLIP MELLOR, Ph.D.
2 A. I reviewed the -- my most recent
3 declaration on written description, I reviewed
4 my declaration on PHOSITA, and I reviewed my
5 expert report.
6 Q. Okay. Did you meet with the attorneys
7 from Loeb & Loeb --
8 A. I did.
9 Q. -- to prepare for the deposition? I'm
10 sorry.
11 A. I did meet with CQG's attorneys to
12 prepare for this deposition.
13 Q. Okay. And who did you meet with?
14 A. I met with Bill Voller and Adam Kelly.
15 Q. Okay. And when was that meeting? Was
16 it just one meeting?
17 A. We met Monday and Tuesday and
18 yesterday.
19 Q. Okay. And were those meetings in
20 Chicago or in Indiana?
21 A. Excuse me. Monday and Tuesday we met
22 in Terre Haute.
23 Q. Okay.
24 A. And yesterday we met here in Chicago.
25 Q. For the Monday and Tuesday meetings in

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1 JOHN PHILLIP MELLOR, Ph.D.
2 Terre Haute, how long were those meetings? Were
3 they all day?
4 A. No. Monday we met all afternoon, and
5 then Tuesday was all morning.
6 Q. Okay. And then the meeting in Chicago
7 yesterday, how long was that meeting?
8 A. That was, essentially, all morning.
9 Q. And did you review documents in these
10 meetings?
11 A. I did.
12 Q. What documents did you review in the
13 meetings?
14 A. Primarily the documents that I
15 mentioned, the -- my most recent declaration,
16 the declaration on written description.
17 Q. Okay.
18 A. We also looked -- looked at the -- my
19 declaration on PHOSITA and my expert report.
20 Q. When -- when you say that you reviewed
21 the declarations, did you review the exhibits to
22 your declarations as well?
23 A. I did.
24 Q. Okay. And can you recall anything that
25 you reviewed in any of the meetings to prepare

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1 JOHN PHILLIP MELLOR, Ph.D.
2 for the deposition that was not a declaration or
3 an expert report or an exhibit to one of your
4 declarations or an expert report?
5 A. I think so.
6 Q. What else did you review?
7 A. I believe I looked at, briefly, CQG's
8 final invalidity contentions.
9 Q. And why did you look at those?
10 MR. VOLLER: Form.
11 THE WITNESS: I looked at those. There's a
12 portion of that that talks about written
13 description, and I just looked at that briefly.
14 BY MR. SAMPSON:
15 Q. Okay. I'm sorry. Was there anything
16 else that you looked at that is not part of your
17 two declarations or your one expert report,
18 including exhibits?
19 A. There very well could have been, but
20 I'm -- I'm not remembering the specific document
21 right off the top of my head right now.
22 Q. Okay.
23 A. If there's a particular one that you're
24 curious about, I'm -- that might jog my memory
25 whether I looked at it or not.

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1 JOHN PHILLIP MELLOR, Ph.D.
 2 Q. You're a little bit of a mind reader.
 3 I'm going to ask you this one.
 4 Did you review any of CQG's products,
 5 software?
 6 MR. VOLLER: Form.
 7 THE WITNESS: I did not.
 8 BY MR. SAMPSON:
 9 Q. Okay. Did you review -- I'm trying to
 10 address Mr. Voller's objection there.
 11 Did you review any documents that
 12 describe the functionality of CQG's products in
 13 preparing for the deposition?
 14 A. I did not.
 15 Q. Okay. Did you review any screenshots
 16 of CQG products to prepare for the deposition?
 17 A. I did not.
 18 Q. Okay. And did you sit at a computer
 19 and operate CQG products to prepare for the
 20 deposition?
 21 A. I did not.
 22 Q. Okay. Separate and apart from
 23 preparing for the deposition, are you familiar
 24 with the functionality of CQG's products?
 25 MR. VOLLER: Form. Scope.

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1 JOHN PHILLIP MELLOR, Ph.D.
 2 THE WITNESS: So I have a general
 3 appreciation of the -- of CQG's products.
 4 My understanding, though, is that today
 5 I'm here to answer questions about my opinions
 6 regarding whether there is written description
 7 support for a price column where only some of
 8 the prices are static or whether there's just
 9 written description support for a price column
 10 where all of the prices in the price column are
 11 static and answer some questions about my
 12 opinions regarding PHOSITA.
 13 And -- and so while I'm familiar with
 14 them in very general terms, that's -- that's not
 15 something that I focused on lately, and I'm not
 16 really prepared to discuss those today.
 17 BY MR. SAMPSON:
 18 Q. Okay. Why don't we mark -- we're going
 19 to put a lot of paper in front of you. We're
 20 going to mark as the next exhibit -- and I've
 21 got -- I've broken this down into two volumes.
 22 This is captioned "Declaration of John
 23 Phillip Mellor, Ph.D., in support of CQG's
 24 Motion for Summary Judgment." I'm going to mark
 25 volume one of this declaration PDX 2362. And

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1 JOHN PHILLIP MELLOR, Ph.D.
 2 I'm going to mark volume two of the deposition
 3 PDX 2363.
 4 (Whereupon, PDX Deposition
 5 Exhibit 2362 was marked for
 6 identification.)
 7 (Whereupon, PDX Deposition
 8 Exhibit 2363 was marked for
 9 identification.)
 10 BY MR. SAMPSON:
 11 Q. And I will ask if you will take a look
 12 and see if you can identify that for us.
 13 MR. VOLLER: Mr. Sampson, is this both
 14 together volume one and volume two?
 15 MR. SAMPSON: Let me just check. I believe
 16 it is. Yes.
 17 MR. VOLLER: Okay.
 18 MR. SAMPSON: I have another stack if you
 19 want one, Bill, just for clarity for your set.
 20 I'm sorry. Volume two starts with Exhibit 14.
 21 MR. VOLLER: Thank you.
 22 MR. SAMPSON: We just put it together so that
 23 hopefully it stays together or it could get
 24 messed up if we're referring to it a lot today.
 25

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1 JOHN PHILLIP MELLOR, Ph.D.
 2 BY MR. SAMPSON:
 3 Q. So the question is do you recognize the
 4 document?
 5 A. I -- I do. This appears to be my
 6 declaration on written description.
 7 Q. Okay. And referring to I guess what
 8 would be the 59th page of the declaration in
 9 volume one, PDX 2362, is that your signature?
 10 A. That is my signature.
 11 Q. Okay. And -- and you executed your
 12 signature on March 16th, 2014; is that correct?
 13 A. That appears to be correct.
 14 Q. Okay. Does -- does this appear to be a
 15 complete copy of the declaration that you
 16 prepared?
 17 A. It does appear to be a complete copy.
 18 I -- I think that there's been one error in --
 19 in compiling this.
 20 Q. Okay.
 21 A. Exhibits 17 and 18 --
 22 Q. Okay.
 23 A. -- I didn't review that entire
 24 transcript. I only reviewed excerpts of it.
 25 And I believe that what's included here as

1 JOHN PHILLIP MELLOR, Ph.D.
 2 Exhibits 17 and 18 are the entire transcript.
 3 So it's a lot bigger than -- than it was.
 4 Q. Okay.
 5 A. And I believe we have corrected copies
 6 of 17 and 18.
 7 Q. Okay. Okay. When you say "we have
 8 corrected copies of 17 and 18," I'm just trying
 9 to follow you. Is there another declaration
 10 that was served that had different Exhibits 17
 11 and 18 or --
 12 A. I don't believe so.
 13 Q. Okay.
 14 A. I believe it was just, you know, in --
 15 so let's see here. In my declaration on page
 16 four, P and Q list excerpts from.
 17 Q. Okay.
 18 A. And so what I actually reviewed and put
 19 together was --
 20 Q. A few pages?
 21 A. -- was much smaller than the entire
 22 transcript. And I -- I think when it -- when it
 23 got compiled to get served somehow, somebody put
 24 the entire transcript instead of the -- you
 25 know, the -- the pieces I actually used.

1 JOHN PHILLIP MELLOR, Ph.D.
 2 for this declaration.
 3 Q. Okay. Okay. And is -- referring
 4 specifically to the declaration now, which --
 5 which is at the top of PDX 2362, the first, you
 6 know, roughly 59 pages I guess that was, is
 7 there anything that you believe is inaccurate
 8 in -- in your declaration?
 9 A. In reviewing it in preparation for this
 10 deposition, I found two typos.
 11 Q. Okay. Can we -- can you tell me what
 12 those are, please?
 13 A. Yes. So on page 58, so it's the -- the
 14 last page before the signature page.
 15 Q. Yes.
 16 A. The heading there, "H Reservations."
 17 Q. Yes.
 18 A. That should be "I Reservations." We
 19 have two Hs.
 20 Q. I gotcha. Do you want to -- can I give
 21 you a pen? Could you just cross that out and
 22 just mark "I" on the exhibit?
 23 A. Absolutely.
 24 MR. SAMPSON: Is that okay with you, Bill?
 25 MR. VOLLER: Yeah, that's fine.

1 JOHN PHILLIP MELLOR, Ph.D.
 2 Q. Okay. If in answering any of the
 3 questions today we need to track down just the
 4 specific pieces that you used, let me know, and
 5 we're happy to do that. I -- I don't think it
 6 will be necessary to do that.
 7 A. Okay. I just -- I just wanted to make
 8 sure that I gave, you know, sort of a complete
 9 answer if this was, you know, complete copy of
 10 -- of my declaration.
 11 Q. Okay. Since March 16 of 2014, have you
 12 reviewed your declaration other than the time
 13 you already mentioned in preparing for the
 14 deposition?
 15 A. To make sure I understand correctly,
 16 other than in -- in preparing for this
 17 declaration, have I reviewed it since I
 18 submitted it for filing?
 19 Q. I'll -- I'll ask it again. Sorry.
 20 Other than in preparing for the
 21 deposition today, have you reviewed the
 22 declaration since March 16th of 2014?
 23 A. Well, I believe -- well, I reviewed it
 24 when I signed it. And I don't recall reviewing
 25 it after -- after that until I started preparing

1 JOHN PHILLIP MELLOR, Ph.D.
 2 BY MR. SAMPSON:
 3 Q. Okay. And what was the other?
 4 A. There's one other, which is on page 12.
 5 Q. Page 12. Hang on. I'm getting there.
 6 Okay. I'm with you.
 7 A. Paragraph 23.
 8 Q. Yes.
 9 A. The -- on the first line, the quoted
 10 phrase, "static display of prices" --
 11 Q. Okay.
 12 A. -- should be a "common static price
 13 axis."
 14 Q. Okay. And can you make that change
 15 on -- on that exhibit copy, please?
 16 A. I will make that change.
 17 Q. Okay. Is there anything else that you
 18 would want to change in the declaration?
 19 A. There's -- those -- those are the only
 20 two typos that I found.
 21 Q. Okay. Do you believe that the
 22 declaration is accurate and complete?
 23 A. I do believe it is accurate and
 24 complete.
 25 Q. And -- and in preparing this

1 JOHN PHILLIP MELLOR, Ph.D.
 2 declaration, you were trying to be complete for
 3 the court, right?
 4 A. I was trying to be as complete and --
 5 and accurate as I could be.
 6 Q. Okay. Why did you do a declaration in
 7 support of the motion?
 8 MR. VOLLER: Form.
 9 THE WITNESS: I'm -- I'm not sure what you
 10 mean by "why."
 11 BY MR. SAMPSON:
 12 Q. You -- is it fair to say that you had
 13 prepared an expert report previously on similar,
 14 if not the same subject matter as your
 15 declaration?
 16 A. That's correct.
 17 Q. Okay. And so why, in connection with
 18 this motion for summary judgment, didn't you
 19 just refer to your expert report?
 20 MR. VOLLER: Form.
 21 THE WITNESS: I'm -- that sounds like sort of
 22 a legal question. I'm not sure exactly -- you
 23 know, I'm not a lawyer. So I don't understand
 24 exactly all of the proceedings that go -- that
 25 are associated with a motion for summary

1 JOHN PHILLIP MELLOR, Ph.D.
 2 separate declaration?
 3 MR. VOLLER: Form.
 4 THE WITNESS: The CQG attorneys asked me to
 5 prepare a declaration and -- and that's what I
 6 did.
 7 BY MR. SAMPSON:
 8 Q. Great. Okay. Thank you.
 9 If you look at paragraph six of your
 10 declaration -- and paragraph six is in the
 11 volume one, PDX 2362 -- you identify a list of
 12 documents reviewed in forming your opinions; is
 13 that correct?
 14 A. That is correct.
 15 Q. In connection with preparing the
 16 declaration, did you review any sources that are
 17 not identified in paragraph six?
 18 A. I didn't review any other sources to --
 19 to arrive at my opinions that are contained in
 20 this document, no.
 21 Q. Okay. I think I'm just going to run
 22 through marking your other -- the other
 23 declaration that you mentioned and your expert
 24 report. And then after we go through that, we
 25 can take a short break. Okay? Is that okay

1 JOHN PHILLIP MELLOR, Ph.D.
 2 judgment. So I think you'd have to ask CQG's --
 3 BY MR. SAMPSON:
 4 Q. Okay.
 5 A. -- attorneys why they asked me to
 6 prepare this declaration.
 7 Q. Okay. And in preparing the
 8 declaration, PDX 2362 and the exhibits continue
 9 at 2363, did you refer back to your expert
 10 report?
 11 MR. VOLLER: Form.
 12 THE WITNESS: The opinions that are included
 13 in the declaration are the same opinions that
 14 are included in my expert report.
 15 BY MR. SAMPSON:
 16 Q. Okay. Thank you. Yeah, that's one of
 17 the issues that I was getting to. If they're
 18 the same, I wasn't sure why you did a separate
 19 paper.
 20 MR. VOLLER: Form.
 21 BY MR. SAMPSON:
 22 Q. Just because they asked?
 23 A. I'm -- is that a question? I'm --
 24 Q. Yeah. Did you just do a separate paper
 25 because the attorneys asked you to prepare a

1 JOHN PHILLIP MELLOR, Ph.D.
 2 with you?
 3 A. That sounds fine.
 4 Q. If you need a break at any time, feel
 5 free to let me know.
 6 A. I'll speak up.
 7 Q. All right.
 8 A. Would it make you nervous if I put my
 9 water on this side? I know water and computers
 10 don't match.
 11 Q. Okay. I'm going to mark as PDX 2364 a
 12 document captioned "January 17, 2014,
 13 Declaration of John Phillip Mellor, Ph.D.,
 14 Regarding Person of Ordinary Skill in the Art."
 15 I'm going to ask you to review that and
 16 ask -- and let me know if you can identify that
 17 document, please.
 18 MR. SAMPSON: Adam, do you want a copy?
 19 (Whereupon, PDX Deposition
 20 Exhibit 2364 was marked for
 21 identification.)
 22 THE WITNESS: I think you asked me a
 23 question, but I -- I think I have lost it.
 24 BY MR. SAMPSON:
 25 Q. That's fine. I'll ask it again. Can

1 JOHN PHILLIP MELLOR, Ph.D.
2 you identify the document that I've marked as
3 PDX 2364?
4 A. Yes. This is my declaration regarding
5 a person of ordinary skill in the art.
6 Q. And you mentioned this earlier. This
7 is something that you reviewed with the
8 attorneys from Loeb & Loeb in preparing for the
9 deposition today; is that correct?
10 A. That's correct.
11 Q. And turning to the declaration, I guess
12 what would be numbered page 30 -- it's not
13 numbered, but it follows 29 -- is that your
14 signature?
15 A. That is my signature.
16 Q. And did you sign the declaration on
17 January 17th, 2014?
18 A. I did.
19 Q. Okay. Is this a complete copy of the
20 declaration that you signed on January 17th?
21 A. It appears to be.
22 Q. Okay. Is there anything in this
23 declaration that is inaccurate or that you'd
24 like to change?
25 A. This -- this appears to be correct.

1 JOHN PHILLIP MELLOR, Ph.D.
2 A. Correct.
3 Q. -- itself?
4 A. Correct.
5 Q. Okay. Again, this declaration -- and
6 let's see if I can direct you to a paragraph.
7 Actually, maybe I'm wrong. Sorry. Let me start
8 over.
9 Looking at your January 17, 2014,
10 declaration, is there an identification in the
11 declaration of the materials that you reviewed
12 in order to prepare the declaration?
13 A. There doesn't appear to be.
14 Q. Sitting here today, do you recall
15 materials that you reviewed -- did you review --
16 strike that. Let me start over.
17 Sitting here today, do you recall if
18 you did review any materials in preparing the
19 declaration that I've marked as PDX 2364?
20 A. Let me make sure I understand. Is the
21 question whether I reviewed anything at all
22 or --
23 Q. Anything outside of this document,
24 right. Did you --
25 MR. VOLLER: Form.

1 JOHN PHILLIP MELLOR, Ph.D.
2 I -- if I remember correctly, when this was
3 originally filed, I think a couple exhibits --
4 the numberings on the exhibits that were
5 attached had the wrong letters. The report was
6 correct and used the correct numbers, and I
7 understand that's been corrected. This appears
8 to -- to be that corrected version.
9 Q. I think that's right based on the cover
10 sheet that we have on Exhibit 2364, but if you
11 know anything --
12 A. I would assume so. And I -- and I
13 checked the change and it -- and it appeared to
14 be the corrected one.
15 Q. Okay. In terms of the substance of the
16 declaration that you prepared on January 17th,
17 are you aware of any inaccuracies or things that
18 you would change based on things that you've
19 learned since January 17th?
20 A. No, there's not. The only thing that I
21 was aware of was just that typographical error
22 with -- in the original filing.
23 Q. Okay. And that was just with respect
24 to the exhibits, not something in the
25 declaration --

1 JOHN PHILLIP MELLOR, Ph.D.
2 THE WITNESS: Outside of this document and
3 the enclosures that -- that are attached to it?
4 BY MR. SAMPSON:
5 Q. Okay. I think we can start with that.
6 Yes. Did -- did -- is that the purpose of the
7 enclosures attached? Are these items that you
8 reviewed in connection with preparing the
9 declaration?
10 A. Yes, it is.
11 Q. Okay. Great.
12 And -- and sitting here today, do you
13 recall if there was anything else that you
14 reviewed that is not attached as an exhibit?
15 A. I don't recall reviewing anything else
16 beyond the exhibits that are attached to this
17 declaration in forming the opinions that are
18 contained in here.
19 Q. Okay. Okay. Great. Thank you.
20 Why did you prepare the declaration
21 marked PDX 2364?
22 MR. VOLLER: Form.
23 THE WITNESS: Again, I'm -- I want to make
24 sure I'm understanding what you mean by "why."
25 I'm -- I'm a little unclear.

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1 JOHN PHILLIP MELLOR, Ph.D.
 2 BY MR. SAMPSON:
 3 Q. Prior to the time of this declaration,
 4 you had already prepared and submitted an expert
 5 report.
 6 A. That's correct.
 7 Q. Is that correct?
 8 And is there some reason that you're
 9 aware of that you needed to prepare a separate
 10 declaration as opposed to simply referring to
 11 the expert report?
 12 MR. VOLLER: Form.
 13 THE WITNESS: Again, I think that that's sort
 14 of a legal question on -- on the proceedings
 15 on -- I don't understand --
 16 BY MR. SAMPSON:
 17 Q. I'm not asking -- I'm not asking you
 18 that.
 19 A. Okay.
 20 Q. Are you aware of a reason that this
 21 separate declaration was necessary as opposed to
 22 simply using your expert report?
 23 A. The CQG attorneys asked me to prepare
 24 it and I did.
 25 Q. Okay. And is there anything in this

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1 JOHN PHILLIP MELLOR, Ph.D.
 2 declaration, PDX 2364, that is not included in
 3 your expert report?
 4 MR. VOLLER: Form.
 5 THE WITNESS: So the opinions that are
 6 reflected in this declaration are identical to
 7 the opinions that are in my original expert
 8 report. This declaration includes some
 9 additional detail and -- and maybe connects the
 10 dots a little more clearly.
 11 BY MR. SAMPSON:
 12 Q. And -- okay. And maybe we'll talk
 13 about some of those -- some of the dots later
 14 on. But I'm going to -- just so that we have
 15 the complete set of documents, I'm going to move
 16 on to marking the expert report.
 17 So, Dr. Mellor, I'm going to put in
 18 front of you a bound copy of a document. The
 19 caption says "Expert Report of John Phillip
 20 Mellor, Ph.D., Regarding Written Description."
 21 I have marked it with -- for identification with
 22 the number PDX 2365.
 23 I'll ask you if you could review that
 24 document and identify it for us.
 25

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1 JOHN PHILLIP MELLOR, Ph.D.
 2 (Whereupon, PDX Deposition
 3 Exhibit 2365 was marked for
 4 identification.)
 5 MR. SAMPSON: Adam?
 6 BY MR. SAMPSON:
 7 Q. For purposes of completeness, I will
 8 let you know that Exhibits 5 through 8 in this
 9 bound volume are omitted because 5 through 8 are
 10 prosecution file histories that would probably
 11 break the table if we -- if we included them.
 12 So I have those in a room next door.
 13 If you want to refer to them at any time, let me
 14 know. I'd be happy to bring them in. But
 15 they're not -- there's placeholders for them in
 16 the bound copy, but they're not there. Okay?
 17 Okay. Can you -- just to restate the
 18 question, do you recognize Plaintiff's DX 2365?
 19 A. I do. This appears to be my expert
 20 report regarding written description. And as
 21 you already mentioned, the prosecution
 22 histories, there's a placeholder in here for
 23 that.
 24 Q. So other than -- other than the
 25 placeholders for the prosecution histories that

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1 JOHN PHILLIP MELLOR, Ph.D.
 2 I've mentioned earlier, does this appear to be
 3 an accurate and complete copy of your expert
 4 report in this case?
 5 A. It does.
 6 Q. And turning to the page following page
 7 62 in PDX 2365, is that your signature?
 8 A. That is my signature.
 9 Q. And -- and did you sign this expert
 10 report on November 25th, 2013?
 11 A. I did.
 12 Q. Is there -- do you believe that the
 13 expert report is accurate and complete?
 14 A. I believe it is accurate and complete.
 15 Q. Is there anything that you would change
 16 or add to the expert report based on things that
 17 you've learned since you prepared the expert
 18 report?
 19 MR. VOLLER: Form.
 20 THE WITNESS: Let me make sure I understand
 21 your -- your question. You asked me if there
 22 are things that I would change in the expert
 23 report?
 24 BY MR. SAMPSON:
 25 Q. Okay. We can start with that.

1 JOHN PHILLIP MELLOR, Ph.D.
 2 A. The -- I think, as I said, I believe
 3 the expert report is -- is complete and
 4 accurate. So -- so, no, there isn't anything I
 5 would change.
 6 Q. Okay. Is there anything that you would
 7 add to the expert report based on things that
 8 you've learned since the time that you signed it
 9 on November 25th?
 10 A. I don't believe so.
 11 Q. Okay. If you turn in the report, I
 12 think it's paragraph 22, it lists a number of
 13 items that you reviewed in forming your
 14 opinions. Is that correct?
 15 A. That -- that is the list of items that
 16 I reviewed in forming the opinions contained in
 17 this report.
 18 Q. Okay. And did you review -- did you
 19 review anything that is not identified in
 20 paragraph 22 to form your opinions that are
 21 included in the report, PDX 2365?
 22 A. I don't believe I did.
 23 Q. Okay. Okay. Great. Why don't we take
 24 a short break.
 25 THE VIDEOGRAPHER: This is the end of Tape

1 JOHN PHILLIP MELLOR, Ph.D.
 2 material on paper?
 3 A. I entered significant portions of it.
 4 But I had help typing it up.
 5 Q. Okay. And who provided the help typing
 6 it up?
 7 A. I worked most closely with Bill Voller.
 8 And -- and the details of how it got entered on
 9 his end, I don't know.
 10 Q. Okay. Was anybody else involved other
 11 than yourself and Mr. Voller?
 12 A. I -- I would imagine that Adam Kelly
 13 was involved and, you know, some of the staff
 14 that work for Adam and Bill were involved.
 15 Q. Okay. And -- okay. And was the same
 16 procedure used for your two declarations as well
 17 as, you know, in addition to the expert report?
 18 MR. VOLLER: Form.
 19 BY MR. SAMPSON:
 20 Q. Let me -- let me start over again.
 21 So you've described how the expert
 22 report was prepared, right?
 23 A. Yes, I have.
 24 Q. Okay. Did -- the same process, was
 25 that used in connection with your declarations?

1 JOHN PHILLIP MELLOR, Ph.D.
 2 No. 1 of the testimony of Dr. Mellor. It is
 3 10:24 a.m. We are going off the record.
 4 (Whereupon, a recess was had at
 5 10:24 a.m., after which the
 6 deposition was resumed at
 7 10:40 a.m. as follows:)
 8 THE VIDEOGRAPHER: It is the beginning of
 9 Tape No. 2 of the testimony of Dr. Mellor. It
 10 is 10:40 a.m. We are back on the record.
 11 BY MR. SAMPSON:
 12 Q. Dr. Mellor, could you pick up PDX 2365
 13 and turn to page seven. I'm going to direct
 14 your attention, please, to paragraph numbered
 15 18.
 16 You know what, actually, strike that.
 17 I'm going to -- let me ask you some
 18 general questions about your expert report,
 19 PDX 2365, and the two declarations that we
 20 marked, just the mechanics of how these
 21 documents were prepared.
 22 Did you write your own expert report?
 23 A. What do you mean by -- by "writing"?
 24 Q. Did you sit down at a computer and
 25 enter -- you know, hit the keys to put this

1 JOHN PHILLIP MELLOR, Ph.D.
 2 A. A similar process was used for both of
 3 the declarations.
 4 Q. And what do you mean by "similar"?
 5 How -- tell me about it.
 6 A. There may have been some small
 7 differences. It wasn't -- it wasn't intended to
 8 be a different process.
 9 Q. Okay. You worked with Mr. Voller to
 10 prepare your declarations?
 11 A. I did.
 12 Q. And -- and some of the material you
 13 compose -- you know, drafted on your own and
 14 some of the material Mr. Voller drafted; is that
 15 right?
 16 MR. VOLLER: Form.
 17 THE WITNESS: So the -- you know, sort of the
 18 ideas and the opinions that are here are all
 19 mine. I had help, you know, sort of getting it
 20 into the proper form and -- and typing it up.
 21 BY MR. SAMPSON:
 22 Q. Okay. Okay. Okay. Let's look at
 23 paragraph 18 of 2365. If you could take a look
 24 at that for me, please.
 25 And it starts out "CQG attorneys

1 JOHN PHILLIP MELLOR, Ph.D.
2 explained that TT is interpreting the claim
3 terms 'common static price axis' and 'static
4 display of prices' (collectively the 'static
5 limitations') of the independent claims as
6 covering a price column having three zones."

7 Do you see -- and -- and it goes on
8 from there. It talks about a top zone and a
9 middle zone and a bottom zone, right?

10 A. I see that, yes.

11 Q. Okay. And did you prepare this portion
12 of your report?

13 MR. VOLLER: Form.

14 THE WITNESS: Are you asking me did I type
15 these words in? I'm -- I'm not -- I'm not
16 clear.

17 BY MR. SAMPSON:

18 Q. I'm more interested in the substance.
19 Who provided the substance of this paragraph?

20 A. Well, I think it -- it accurately
21 recounts what happened. CQG's attorneys
22 explained this to me.

23 Q. Okay. And it goes on -- it goes on to
24 say that CQG's attorneys explained to you that
25 the static limitation is satisfied so long as

1 JOHN PHILLIP MELLOR, Ph.D.

2 A. There very well may have been some
3 documents, and I imagine that a lot of it was,
4 you know, in a phone conversation.

5 Q. Okay. Did -- did you review any CQG
6 product information --

7 MR. VOLLER: Form.

8 BY MR. SAMPSON:

9 Q. -- at this -- during this conversation
10 where the CQG's attorneys were explaining to you
11 TT's interpretation of the claims?

12 MR. VOLLER: Form.

13 THE WITNESS: For my opinions as they are
14 presented in this -- this is my report,
15 right? -- as expressed in my report didn't
16 consider CQG products.

17 BY MR. SAMPSON:

18 Q. Okay. This description about a price
19 column with three zones, are those your words in
20 paragraph 18?

21 MR. VOLLER: Form.

22 THE WITNESS: Again, this paragraph is
23 describing what CQG attorneys explained to me.

24 BY MR. SAMPSON:

25 Q. Right. Are those your words reflecting

1 JOHN PHILLIP MELLOR, Ph.D.
2 any portion of a price column is static; is that
3 correct?

4 MR. VOLLER: Form.

5 THE WITNESS: I don't think that's what CQG's
6 attorneys said, and I don't think that's what's
7 recorded here.

8 BY MR. SAMPSON:

9 Q. Okay. Let me state it again. Maybe I
10 missaid it.

11 They explained to you that TT considers
12 the static limitation satisfied so long as any
13 portion of a price column is static?

14 A. I -- I think that more accurately
15 represents what's there, yes.

16 Q. Okay. Okay. And how did you come to
17 understand TT's position?

18 MR. VOLLER: Form.

19 THE WITNESS: As explained in this paragraph,
20 CQG's attorneys explained that to me.

21 BY MR. SAMPSON:

22 Q. How did they do that?

23 A. I'm -- I'm a little confused. I don't
24 know what you mean by "how."

25 Q. Did they show you any documents?

1 JOHN PHILLIP MELLOR, Ph.D.
2 what CQG's attorneys explained to you?

3 MR. VOLLER: Form.

4 THE WITNESS: I think I understand what
5 you're asking. This -- this paragraph
6 represents my understanding of what they
7 explained to me.

8 BY MR. SAMPSON:

9 Q. Okay. Thank you.

10 And -- and in this paragraph you're
11 talking about a top zone having prices that are
12 not static. Do you see that?

13 A. I see that, yes.

14 Q. What does that mean?

15 MR. VOLLER: Form. Scope.

16 THE WITNESS: I think that's -- I think it
17 means exactly what's -- what's written there.

18 And, again, this is just capturing my
19 understanding of what they explained to me.

20 BY MR. SAMPSON:

21 Q. Okay. So your understanding of the --
22 tell me your understanding of the three zones in
23 TT's static interpretation.

24 A. So I'm -- I'm -- I'm a little confused
25 here. I think -- my understanding was that I

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1 JOHN PHILLIP MELLOR, Ph.D.
2 was here today to explain and answer questions
3 about my opinions regarding written description
4 support for a price column where only some of
5 the prices were static or whether there was
6 written description support for a price column
7 where all of the prices were static.
8 And this is what CQG's attorneys
9 explained to me. But that didn't factor into my
10 arrival at my opinions.
11 Q. Okay. I'm a little confused, because I
12 thought earlier today you said that the
13 opinion -- the opinions expressed in the expert
14 report and the opinions expressed at least for
15 issues dealt with in the summary judgment
16 declaration did not change.
17 MR. VOLLER: Form.
18 THE WITNESS: I think that's absolutely
19 correct. My opinions in this expert report have
20 not changed, and the same opinions are reflected
21 in my declaration on written description.
22 BY MR. SAMPSON:
23 Q. Okay. And those opinions are based on
24 an understanding that you have of TT's
25 interpretation of the claims; is that correct?

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1 JOHN PHILLIP MELLOR, Ph.D.
2 A. That's not correct.
3 Q. That's not correct. Okay. Why is that
4 not correct?
5 A. So the work that I did was to identify
6 whether there was written description support
7 for a price column where all prices were static
8 or was there written description support for a
9 price column where only some of the prices were
10 static.
11 Q. And -- and when you say that was the
12 work you did, are you referring to the expert
13 report, the declaration, or both?
14 MR. VOLLER: Form.
15 THE WITNESS: The opinion that I arrived at
16 is the same in both places. The analysis is --
17 is the same analysis.
18 BY MR. SAMPSON:
19 Q. Okay. And is this part of your
20 analysis on that issue?
21 MR. VOLLER: Form.
22 BY MR. SAMPSON:
23 Q. Is paragraph -- I'm referring to
24 paragraph 18 of 2365. Is that part of your
25 analysis on the issue of whether there's written

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1 JOHN PHILLIP MELLOR, Ph.D.
2 description support for TT's claims?
3 MR. VOLLER: Form.
4 THE WITNESS: I'm -- I'm not sure what you
5 mean by -- by analysis there. This is purely
6 stating what was explained to me by CQG's
7 attorneys.
8 BY MR. SAMPSON:
9 Q. Okay. Let me step back then. Is this
10 material in any way to any of your opinions,
11 paragraph 18?
12 MR. VOLLER: Form.
13 THE WITNESS: No, I don't believe that TT's
14 interpretation or CQG's explanation of TT's
15 interpretation is any way material to my
16 analysis and the opinion that I reached on
17 whether there is written description for a price
18 column where all prices are static or whether
19 there's written description for a price column
20 where only some of the prices are static.
21 BY MR. SAMPSON:
22 Q. Okay. So I'm a little bit confused,
23 then, as to why this is included in your scope
24 of the assignment description if it's not
25 material to the opinion that you arrived at.

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1 JOHN PHILLIP MELLOR, Ph.D.
2 MR. VOLLER: Form.
3 THE WITNESS: It may have had something to do
4 with the motivation on why CQG's attorneys asked
5 me to look at this question.
6 But it didn't have any impact on sort
7 of the starting point or -- or the opinion that
8 was arrived at.
9 BY MR. SAMPSON:
10 Q. Okay. Let's -- let's switch to
11 PDX 2362. And you can kind of keep that
12 close-by because I'm going to ask you to compare
13 the two.
14 If you could pick up 2362, it's volume
15 one of your declaration in support of the
16 summary judgment. Do you have that in front of
17 you?
18 A. I have 2362 in front of me.
19 Q. Perfect. Okay. Turn to, if you would,
20 please, page two, paragraph four. And this
21 follows -- this is the second paragraph under
22 the heading "Scope of the Assignment."
23 And paragraph four, what is paragraph
24 four under "Scope of the Assignment" in your
25 declaration?

1 JOHN PHILLIP MELLOR, Ph.D.
 2 MR. VOLLER: Form.
 3 THE WITNESS: Do you want me to read
 4 paragraph four?
 5 BY MR. SAMPSON:
 6 Q. Certainly, if -- if you like.
 7 A. Okay. I have read it.
 8 Q. Okay. You notice that paragraph four
 9 of Exhibit 2362 is worded differently than
 10 paragraph 18, which we were just looking at of
 11 2365, PDX 2365, correct?
 12 A. It is.
 13 Q. And why is that?
 14 MR. VOLLER: Form.
 15 THE WITNESS: I'm not sure exactly what
 16 you're asking me with why is it different.
 17 BY MR. SAMPSON:
 18 Q. You agree that it's different, correct?
 19 A. I agree that it's different.
 20 Q. Okay. Is there -- is paragraph four of
 21 PDX 2362 material to your opinion regarding a
 22 written description reflected in PDX 2362?
 23 MR. VOLLER: Form.
 24 THE WITNESS: I -- I think the answer is the
 25 same for the same question that you asked about

1 JOHN PHILLIP MELLOR, Ph.D.
 2 some -- some words are different.
 3 BY MR. SAMPSON:
 4 Q. Right. Is the meaning different?
 5 MR. VOLLER: Form. Scope.
 6 THE WITNESS: I don't know. I'm -- I'm not
 7 sure I put a lot of thought in -- into the
 8 meaning of those two paragraphs. Like I said,
 9 it didn't impact my analysis and -- and it
 10 doesn't have an impact on the opinions that I
 11 reached.
 12 So I'm not sure I considered that that
 13 deeply.
 14 BY MR. SAMPSON:
 15 Q. Okay. So I just want to -- I want to
 16 make sure that we're both clear on what you're
 17 saying.
 18 Are you saying that you did not use
 19 TT's static interpretation, as defined in
 20 paragraph four of PDX 2362, in arriving at your
 21 opinions about written description that are
 22 recited in PDX 2362?
 23 MR. VOLLER: Form.
 24 THE WITNESS: I'm not sure I understand
 25 exactly what you're asking. And I -- I want to

1 JOHN PHILLIP MELLOR, Ph.D.
 2 my expert report.
 3 TT's interpretation and CQG's
 4 attorney's explanation of TT's interpretation
 5 doesn't in any way impact the analysis that I
 6 did or the opinions that I reached.
 7 My analysis was to look at and
 8 determine whether there was written description
 9 support for a price column with all prices
 10 static or whether there was written description
 11 support for a price column where only some of
 12 the prices were static.
 13 BY MR. SAMPSON:
 14 Q. Okay. So both paragraphs, paragraph 18
 15 in 2365 and paragraph four in PDX 2362, recite
 16 what CQG attorneys explained to you about TT's
 17 interpretation of the static limitation. Is
 18 that correct?
 19 A. That is correct.
 20 Q. Okay. And is there a difference in the
 21 two explanations?
 22 MR. VOLLER: Form. Scope.
 23 THE WITNESS: I'm not sure the level of
 24 difference that you are talking about. Are the
 25 words in those two paragraphs different? Sure,

1 JOHN PHILLIP MELLOR, Ph.D.
 2 make sure I get this -- this right.
 3 Maybe you could help clarify.
 4 So as I've stated, the analysis that I
 5 did was to consider whether there was written
 6 description support for a price column where all
 7 prices were static or whether there was written
 8 description support for a price column where
 9 only some of the prices were static.
 10 So that's the analysis that I did. And
 11 the opinions that I arrive at focus on that.
 12 The -- the exact explanation that CQG
 13 attorneys gave me or TT's interpretation or
 14 CQG's attorneys' understanding of TT's
 15 interpretation didn't impact the analysis that I
 16 did because it was the same -- I mean, it was
 17 the same question in both cases. And -- and the
 18 opinions that I arrived at covered that -- that
 19 case.
 20 BY MR. SAMPSON:
 21 Q. Okay. So I -- here is where I -- we're
 22 having a disconnect. Okay? And I want to work
 23 through it so that hopefully the record will be
 24 clear at some point what we're talking about.
 25 First, I would like you to look back at

1 JOHN PHILLIP MELLOR, Ph.D.
 2 your expert report on page 20, and we're going
 3 to look at the first sentence of paragraph 47.
 4 Your expert report is PDX 2365.
 5 Do you see where I'm referring to,
 6 Dr. Mellor?
 7 A. I see page 20, yes.
 8 Q. Okay. And do you see paragraph 47 on
 9 page 20, in the first sentence of paragraph 47,
 10 it says "In my opinion, the '132 and '304
 11 patents do not provide written description
 12 support for TT's trifurcation interpretation of
 13 the static limitation"?
 14 A. I see that.
 15 Q. Do you see that? Okay.
 16 And so this is -- so I thought just a
 17 few minutes ago you told me that TT's
 18 interpretation of the claims was not relevant to
 19 your opinions on written description.
 20 MR. VOLLER: Form.
 21 THE WITNESS: I did, and I still think that's
 22 true.
 23 BY MR. SAMPSON:
 24 Q. And -- and you need to explain to me
 25 how that squares with the first sentence of

1 JOHN PHILLIP MELLOR, Ph.D.
 2 prices that move."
 3 And -- and I think, just to move things
 4 along right now, what I want to ask you is,
 5 is -- is this analysis that you did about
 6 whether the inventors were in possession of a
 7 price axis with three zones, is that no longer
 8 part of your written description analysis or is
 9 it part of your written description analysis
 10 still?
 11 MR. VOLLER: Form.
 12 THE WITNESS: I -- I think what's -- what's
 13 there is accurate. And if you read those last
 14 two sentences, if you're only in possession of a
 15 single price column where all of the prices are
 16 static, you can't be -- possibly be in
 17 possession of any of the other things.
 18 BY MR. SAMPSON:
 19 Q. I -- I disagree with you. But, you
 20 know, we're not going to argue about it.
 21 MR. VOLLER: Form.
 22 BY MR. SAMPSON:
 23 Q. So let's -- again, I'm going to keep
 24 referring into your expert report, PDX 2365.
 25 We'll look at one paragraph here, paragraph 21,

1 JOHN PHILLIP MELLOR, Ph.D.
 2 paragraph 47.
 3 MR. VOLLER: Form.
 4 THE WITNESS: Well, I think if you read the
 5 last few sentences of that exact same paragraph,
 6 it goes on to say "nor were the inventors in
 7 possession of a graphical user interface where
 8 only a portion of the displayed prices in the
 9 price column are static. Instead, the inventors
 10 were in possession of a graphical user interface
 11 with only a single price column where all
 12 displayed prices in the graphical user interface
 13 are static, other than in response to a manual
 14 recentering command."
 15 BY MR. SAMPSON:
 16 Q. So you skipped the "in other words"
 17 sentence of that paragraph that says "In other
 18 words, the inventors at the time of filing were
 19 not in possession of a graphical user interface
 20 having a price column with three zones: One, a
 21 top zone having prices that are not static,
 22 i.e., prices that move; two, a middle zone that
 23 has prices that are allegedly static, i.e.,
 24 prices that do not move; and, three, a bottom
 25 zone having prices that are not static, i.e.,

1 JOHN PHILLIP MELLOR, Ph.D.
 2 which is on page eight.
 3 And -- and I want to ask you, do you
 4 see the last sentence of paragraph 21 -- this is
 5 in your expert report -- "CQG attorneys asked me
 6 to determine whether the '304 and '132 patents
 7 disclose written description support for TT's
 8 trifurcation interpretation of a static
 9 limitation and TT's multi-mode interpretation of
 10 the static limitation."
 11 And my question is is that accurate?
 12 Did they ask you to do that?
 13 MR. VOLLER: Form.
 14 THE WITNESS: I believe that's accurate.
 15 It -- it may be able -- it perhaps could be more
 16 clear. But -- but I think that's accurate,
 17 nonetheless.
 18 BY MR. SAMPSON:
 19 Q. Okay. And -- and just so the record's
 20 clear, when we're talking about TT's
 21 trifurcation interpretation, that's the
 22 description that's defined in paragraph 18 of
 23 your expert report; is that correct?
 24 MR. VOLLER: Form.
 25 THE WITNESS: Oh, I think -- I think that I

1 JOHN PHILLIP MELLOR, Ph.D.
 2 interpreted that as being broader. If you look
 3 at the introduction to my expert report, it says
 4 quite clearly "First, CQG attorneys asked me to
 5 opine as to whether a computer programmer of
 6 ordinary skill would understand that the
 7 inventors of United States Patent Nos. 6,766,304
 8 and 6,772,132 at the time of the corresponding
 9 applications were filed in 2000 were in
 10 possession of a graphical user interface that
 11 included a price column where all prices are
 12 static or only some of the prices are static."
 13 BY MR. SAMPSON:
 14 Q. Okay. That's not the question that I
 15 asked you.
 16 The question that I asked you was when
 17 paragraph 21 says that the attorneys asked you
 18 to determine whether there's written description
 19 support for TT's trifurcation interpretation of
 20 the static limitation, is TT's trifurcation
 21 interpretation of the static limitation defined
 22 in your report in paragraph 18?
 23 MR. VOLLER: Form.
 24 BY MR. SAMPSON:
 25 Q. Is that a defined term in paragraph 18?

1 JOHN PHILLIP MELLOR, Ph.D.
 2 Q. Okay. I'm going to ask the question
 3 again because you didn't answer my question,
 4 which was did you do what they asked you to do
 5 at the end of paragraph 21?
 6 MR. VOLLER: Form. Asked and answered.
 7 THE WITNESS: I think I have answered that
 8 question. I told you what I did. And that if
 9 you -- if there is no written description
 10 support for a price column where only some of
 11 the prices are static, meaning that you only
 12 have written description support for a price
 13 column where all of the prices are static, you
 14 can't possibly have support for TT's multi-mode
 15 interpretation.
 16 BY MR. SAMPSON:
 17 Q. When you say "TT's multi-mode
 18 interpretation," is that the same as TT's
 19 trifurcation interpretation?
 20 A. I'm sorry. I misspoke. TT's
 21 trifurcation interpretation of the static
 22 limitation, yes, that's what I meant to say.
 23 Q. Okay. And in performing the tasks that
 24 you were asked to do by CQG's attorneys, did you
 25 look at Trading Technologies' infringement

1 JOHN PHILLIP MELLOR, Ph.D.
 2 MR. VOLLER: Form.
 3 THE WITNESS: Yeah, I think that's --
 4 that's -- 18 identifies that, and those words
 5 are used in 21, yes.
 6 BY MR. SAMPSON:
 7 Q. Okay. And did you do what CQG
 8 attorneys asked you to do in paragraph 21?
 9 MR. VOLLER: Form.
 10 THE WITNESS: I think, as outlined in the
 11 introduction and elsewhere in here, I considered
 12 whether there was written description support
 13 for a price axis where all of the prices are
 14 static or whether there was written description
 15 support for a price column where only some of
 16 the prices are static.
 17 BY MR. SAMPSON:
 18 Q. Okay.
 19 A. And then if -- if you -- you would
 20 necessarily have to have support for a price
 21 column where only some of the prices are static
 22 in order to have support for this multi-mode
 23 interpretation.
 24 So if there wasn't support for that,
 25 that's all -- that's all you needed.

1 JOHN PHILLIP MELLOR, Ph.D.
 2 contentions?
 3 A. In --
 4 MR. VOLLER: Form.
 5 THE WITNESS: In forming these -- the
 6 opinions that are recorded here in my expert
 7 report and my declaration, I did not look at
 8 TT's infringement contentions.
 9 BY MR. SAMPSON:
 10 Q. Okay. If you look in -- let's look at
 11 page ten of your expert report. This is
 12 PDX 2365 and I'm going to refer you to small
 13 letter P.
 14 Do you see that?
 15 A. I do see that.
 16 Q. Okay. And it says "TT's supplemental
 17 file infringement contentions with respect to
 18 CQG's products pursuant to local Rule 3.1 dated
 19 August 16, 2013."
 20 Do you see that?
 21 A. I do see that.
 22 Q. And as an introduction in this
 23 paragraph 22, at the top of the paragraph, it
 24 says "I formed my opinions based on my
 25 knowledge, background, education, experience,

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1 JOHN PHILLIP MELLOR, Ph.D.
 2 and review of the following documents and
 3 things."
 4 A. I do see that.
 5 Q. Okay. So did you look and review TT's
 6 infringement contentions in forming your
 7 opinions for your expert report?
 8 A. I must have looked at them, yes.
 9 Q. And why did you look at the
 10 infringement contentions, TT's infringement
 11 contentions?
 12 A. Well, I don't -- I don't remember a
 13 specific reason that I looked at them as I sit
 14 here today.
 15 Q. Do you have an understanding or -- I'm
 16 sorry. Strike that.
 17 In your analysis of the written
 18 description issue, why is it relevant whether
 19 there's written description support for a price
 20 column with some price levels static and other
 21 price levels not static?
 22 MR. VOLLER: Form. Scope.
 23 THE WITNESS: That -- that to me sounds a
 24 little bit like a legal question and -- and I'm
 25 not a lawyer. So the -- the exact significance

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1 JOHN PHILLIP MELLOR, Ph.D.
 2 of whether there's written description support
 3 or not, that's not something that I'm -- I feel
 4 that I'm qualified to really give a lot of
 5 opinion about.
 6 What I did was to simply look and see
 7 if there -- as CQG's attorneys asked me to,
 8 whether there was written description support
 9 for a price column where all prices were static
 10 or whether there was written description support
 11 for a price column where only some of the prices
 12 were static.
 13 BY MR. SAMPSON:
 14 Q. And do you have any understanding,
 15 sitting here today, of the significance of that
 16 distinction that you're drawing between static
 17 and nonstatic prices?
 18 MR. VOLLER: Form and scope.
 19 THE WITNESS: Well, I have -- I have limited
 20 understanding, and my understanding of the
 21 patent law as it was explained to me by CQG's
 22 attorneys is captured in my report.
 23 BY MR. SAMPSON:
 24 Q. Is it fair to say then that with
 25 respect to the legal significance of whether

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1 JOHN PHILLIP MELLOR, Ph.D.
 2 the written -- there's written description
 3 support for a price level -- strike that. Let
 4 me start over.
 5 Is it fair to say that your
 6 understanding of the significance of -- of a
 7 price column with some price levels that are
 8 static and other price levels that are not
 9 static is based on information from CQG
 10 attorneys?
 11 MR. VOLLER: Form. Scope.
 12 THE WITNESS: Let me make sure I understand
 13 the question that you're asking me.
 14 You asked me whether my understanding
 15 of the legal significance of the written
 16 description analysis I performed, my
 17 understanding of that came through CQG
 18 attorneys?
 19 BY MR. SAMPSON:
 20 Q. No. Let me -- let me -- let me -- I'll
 21 recite -- I'll restate the question.
 22 You looked for written description
 23 support for a price axis where only some of the
 24 price levels are static and others are not; is
 25 that correct?

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1 JOHN PHILLIP MELLOR, Ph.D.
 2 MR. VOLLER: Form.
 3 THE WITNESS: The written description
 4 analysis that we're talking about right now
 5 focused on whether there was written description
 6 support for a price column where all prices were
 7 static or whether there was written description
 8 support for a price column where only some of
 9 the prices were static.
 10 BY MR. SAMPSON:
 11 Q. And -- and you were focusing on that
 12 issue because CQG attorneys asked you to analyze
 13 that issue; is that right? Or was there some
 14 other reason?
 15 A. That's the task or my understanding of
 16 the task that they asked me to do.
 17 Q. Okay. Did they -- did they ever charge
 18 you with the task of looking at the words in the
 19 claims of TT's patents in this case and figuring
 20 out if there's written description support for
 21 the words in the claims?
 22 MR. VOLLER: Form. Scope.
 23 THE WITNESS: I'm -- I'm -- I'm not sure I
 24 understand what you mean by the words of the
 25 claims. And can -- can you rephrase that

1 JOHN PHILLIP MELLOR, Ph.D.
 2 another way?
 3 BY MR. SAMPSON:
 4 Q. Well, okay. So when -- you mentioned
 5 that you were tasked to look at whether there
 6 was written description support for a graphical
 7 user interface that included a price column
 8 where all prices are static or only some of the
 9 prices are static, correct?
 10 A. That's correct. That's what I said.
 11 Q. All right. And you were only opining
 12 that there's no written description support for
 13 a price column with some prices static and some
 14 prices not static.
 15 MR. VOLLER: Form.
 16 BY MR. SAMPSON:
 17 Q. Is that right?
 18 MR. VOLLER: Form.
 19 THE WITNESS: I don't believe that's what I
 20 said for my opinion. I said that there was only
 21 written description support for a single price
 22 column where all of the prices were static.
 23 BY MR. SAMPSON:
 24 Q. Okay.
 25 A. And that there was no support for a

1 JOHN PHILLIP MELLOR, Ph.D.
 2 are static.
 3 Q. Okay. So in this terminology where
 4 we're talking about a price column with some
 5 prices static and others that are not static --
 6 do you know what I'm talking about here?
 7 MR. VOLLER: Form.
 8 BY MR. SAMPSON:
 9 Q. Are you following me?
 10 MR. VOLLER: Form.
 11 THE WITNESS: I think so.
 12 BY MR. SAMPSON:
 13 Q. Okay. Well, let me try to make it
 14 clear.
 15 Did you analyze the claims of the
 16 patents-in-suit to see if they recite a price
 17 column where some of the price levels are static
 18 and some of the price levels are not static?
 19 MR. VOLLER: Form. Scope.
 20 THE WITNESS: Again, the -- the claims, you
 21 know, reciting a feature, that -- that starts to
 22 sound like an infringement analysis for me -- to
 23 me.
 24 BY MR. SAMPSON:
 25 Q. So you did not do that?

1 JOHN PHILLIP MELLOR, Ph.D.
 2 price column where only some of the prices were
 3 static.
 4 Q. Okay. And is it your understanding
 5 that the claims in the patents-in-suit require
 6 only some of the price levels to be static?
 7 MR. VOLLER: Form. Scope.
 8 THE WITNESS: I don't understand what you're
 9 asking me about the claims require. Can -- can
 10 you explain what -- what you mean by that?
 11 BY MR. SAMPSON:
 12 Q. Is that part of your written
 13 description analysis? Did you -- did you
 14 determine what the claims require?
 15 MR. VOLLER: Form. Scope.
 16 THE WITNESS: Claims require, that -- that
 17 sounds like an infringement issue or an
 18 infringement analysis.
 19 BY MR. SAMPSON:
 20 Q. Okay.
 21 A. And I'm only here today to discuss my
 22 opinions regarding written description support
 23 for the price column where all prices are static
 24 or whether there's written description support
 25 for a price column where only some of the prices

1 JOHN PHILLIP MELLOR, Ph.D.
 2 A. I'm not -- I'm not a lawyer. So I'm
 3 not, you know -- I'm a little uncomfortable
 4 trying to understand what exactly you mean by
 5 "require" and -- and those -- those kinds of
 6 phrases.
 7 Q. I just said "recite" this time.
 8 A. Uh-huh.
 9 Q. Did you do the analysis of whether the
 10 claims recite a price axis where some of the
 11 price levels are static and some are not?
 12 MR. VOLLER: Form. Scope.
 13 THE WITNESS: Again, I did, you know, a
 14 written -- written description analysis. And,
 15 you know, my understanding of that -- what that
 16 written description -- written description
 17 requires is spelled out in my report.
 18 And I looked at the claims themselves
 19 as spelled out in my report and analyzed whether
 20 there was written description support for a
 21 price column where all of the prices were static
 22 or whether there was written description support
 23 for a price column where only some of the prices
 24 were static.
 25

1 JOHN PHILLIP MELLOR, Ph.D.
 2 BY MR. SAMPSON:
 3 Q. And -- and your focus on whether all
 4 the prices are static or only some of the prices
 5 are static, were you told to focus on that by
 6 CQG's attorneys?
 7 A. The -- the task that I was assigned as
 8 far as the written description analysis?
 9 Q. Right.
 10 A. Yes, CQG's attorneys gave me the task.
 11 Q. Did they also give you the task
 12 separately of looking at the claims, the
 13 independent claims, let's say, of the
 14 patents-in-suit and trying to determine whether
 15 the independent claims recited a price axis that
 16 was some price level static and other price
 17 levels that were not static?
 18 MR. VOLLER: Form and scope.
 19 THE WITNESS: Again, when you're using
 20 phrases like "require" and "recite," that --
 21 that seems to be different from the written
 22 description analysis that I did. That seems to
 23 be an infringement thing.
 24 BY MR. SAMPSON:
 25 Q. Okay. Did -- did they ask you to look

1 JOHN PHILLIP MELLOR, Ph.D.
 2 not there was a written description support for
 3 a price column where only some of the prices
 4 were static.
 5 Q. So -- okay. Your -- you have an
 6 opinion in this -- it's reflected in your expert
 7 report, 2365. It's also reflected in your
 8 declaration, 2362 -- that there is no written
 9 description support for a price column with some
 10 prices static and some not static; is that
 11 right?
 12 A. That's correct. I -- I -- my opinion
 13 is that there is no written description support
 14 for a price column where only some of the prices
 15 are static, that there is only written
 16 description support for a price column where all
 17 of the prices are static.
 18 Q. Okay. And -- and where is that in the
 19 claims, that requirement?
 20 MR. VOLLER: Form. Scope.
 21 THE WITNESS: Again, I'm -- I'm confused by
 22 the words that you're using because requirement
 23 and written description analysis seem to be two
 24 different things to me.
 25

1 JOHN PHILLIP MELLOR, Ph.D.
 2 at the claims in the patents-in-suit and decide
 3 if -- or opine whether the claims have written
 4 description support?
 5 MR. VOLLER: Form. Asked and answered.
 6 THE WITNESS: I think I said I looked at
 7 the -- the words in the claim and -- and did a
 8 written description analysis on the words in the
 9 claim. And that's contained in my -- my expert
 10 report.
 11 BY MR. SAMPSON:
 12 Q. And can you show me -- let's look at
 13 the claim. I think you have one of them there.
 14 I'm looking at your expert report, page 15.
 15 Where in claim one does it recite a
 16 price axis where some price levels are static
 17 and others are not?
 18 MR. VOLLER: Form.
 19 THE WITNESS: That's not what I said. I said
 20 I looked at this claim --
 21 BY MR. SAMPSON:
 22 Q. Okay.
 23 A. -- and -- to identify whether there was
 24 written description support for a price column
 25 where all the prices were static or whether or

1 JOHN PHILLIP MELLOR, Ph.D.
 2 BY MR. SAMPSON:
 3 Q. Okay.
 4 A. And -- and so you keep coming back to
 5 that word requirement, and I'm getting --
 6 Q. Maybe --
 7 A. I'm trying to be helpful, but I -- but
 8 it's just not jiving for me.
 9 Q. All right. Let me -- let me back up.
 10 As part of your written description
 11 analysis, did you endeavor on your own to -- to
 12 try to set out what the claims require?
 13 MR. VOLLER: Form. Scope.
 14 THE WITNESS: Not as part of my written
 15 description analysis.
 16 BY MR. SAMPSON:
 17 Q. Right. Okay. So did you, as part of
 18 your written description analysis -- do you have
 19 some understanding, based on conversations with
 20 CQG's attorneys, that the claim -- the claims of
 21 TT's patents are broad enough to cover a price
 22 column with some prices static and others that
 23 are not?
 24 MR. VOLLER: Form.
 25

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1 JOHN PHILLIP MELLOR, Ph.D.
2 BY MR. SAMPSON:
3 Q. Is that your understanding?
4 A. Again, my understanding is that I'm
5 here today to answer questions about my opinions
6 related to my -- the written description
7 analysis that I performed. And whether claims
8 are broad enough and cover, that -- that seems
9 to be an infringement analysis and -- and
10 that's -- that's not what my opinions here are,
11 and that's not what I'm prepared to discuss
12 today.
13 Q. Okay. Do you believe that the
14 patents-in-suit are invalid for lack of written
15 description?
16 MR. VOLLER: Form and scope.
17 THE WITNESS: I haven't been asked to
18 consider that, nor have I done that.
19 BY MR. SAMPSON:
20 Q. Okay. Do you think it is relevant to
21 the validity of the claims of the patents
22 whether there is written description support for
23 a price column where some prices are static and
24 others are not?
25 MR. VOLLER: Form. Scope.

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1 JOHN PHILLIP MELLOR, Ph.D.
2 THE WITNESS: So --
3 MR. VOLLER: Relevance.
4 THE WITNESS: So in my written report, I
5 summarized my understanding of the patent law.
6 BY MR. SAMPSON:
7 Q. Okay.
8 A. And my understanding of the written
9 description requirement, as -- as it's recorded
10 in my expert report, is that the written
11 description requirement is to prevent patent
12 owners and inventors from -- from overreaching
13 their -- their patent.
14 And my understanding is that through a
15 legal process that I don't really understand
16 very well because I'm not a lawyer, that a lack
17 of written description might have some
18 consequences to the -- to the validity of the
19 patent.
20 Q. When you say prevent a patent owner
21 from overreaching and you use that phrase in
22 your report and in your declaration, what does
23 that mean?
24 MR. VOLLER: Form. Scope.
25 THE WITNESS: My understanding is that the

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1 JOHN PHILLIP MELLOR, Ph.D.
2 patent owner needs to fully describe in writing
3 the invention that -- that they're attempting to
4 patent. And that's the written description
5 requirement. They must describe it.
6 And -- and so if there's not a -- a
7 written -- you know, if they haven't described
8 in writing their invention, then that has an
9 impact on -- on whether -- whether it's valid or
10 not.
11 BY MR. SAMPSON:
12 Q. Let me give you a hypothetical
13 question, okay, just to see if we are on the
14 same page. Okay?
15 If you have a claim that calls for a
16 chair comprising four legs and the patent owner
17 asserts that a chair with five legs falls within
18 the scope of the claim, using your understanding
19 of the written description requirement, is there
20 a written description problem in that situation?
21 MR. VOLLER: Form. Scope. Incomplete
22 hypothetical.
23 THE WITNESS: I don't think you've given me
24 enough information to be able to do that
25 analysis.

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1 JOHN PHILLIP MELLOR, Ph.D.
2 BY MR. SAMPSON:
3 Q. What -- what other information do you
4 need?
5 MR. VOLLER: Same objections.
6 THE WITNESS: Well, I would -- I would like
7 to look at the exact claims, look at the full
8 patent and -- and be able to do that analysis
9 completely to -- to decide whether that
10 invention was properly described in -- in the --
11 in the patent.
12 BY MR. SAMPSON:
13 Q. If -- if the exact claim was a chair
14 comprising four legs and the only example
15 described in the patent is a chair with four
16 legs, then do you believe there would be a
17 written description problem if the patent owner
18 asserts that claim against a chair having five
19 legs?
20 MR. VOLLER: Form. Scope. Incomplete
21 hypothetical.
22 THE WITNESS: Maybe. Maybe not. Like I
23 said, I think -- I think this is a little bit
24 hypothetical, and it feels like I'm missing a
25 lot of information. It might be a written

1 JOHN PHILLIP MELLOR, Ph.D.
 2 description problem. It might not.
 3 BY MR. SAMPSON:
 4 Q. Okay. I'm happy to give you -- if you
 5 can tell me any other specific information that
 6 you need, I could fill it in. But I'm not sure
 7 what other information you would be interested
 8 in knowing about the hypothetical.
 9 MR. VOLLER: Form.
 10 THE WITNESS: I'm -- I'm not exactly sure. I
 11 would like to know, you know, sort of what
 12 the -- what the -- exactly how the claims are
 13 worded and, you know, sort of the -- exactly how
 14 the invention is described in the disclosure,
 15 what any figures that are included in the
 16 patent, you know, look like.
 17 I -- you know, I think it -- it's hard
 18 to say. I think I can imagine ways of drafting
 19 that patent, describing that patent in writing,
 20 that would limit it to just four legs. I think
 21 I could imagine other ways of describing that
 22 invention where it would cover chairs with any
 23 number of legs. I think it depends critically
 24 on the details of what's in the patent and
 25 what's not.

1 JOHN PHILLIP MELLOR, Ph.D.
 2 guidance on legal principles relating to those
 3 laws and in particular a primer on the component
 4 parts of a patent claim construction and the
 5 written description requirement."
 6 Do you see that?
 7 A. I do see that.
 8 Q. Okay. So tell me about the primer.
 9 What -- what form did that take?
 10 A. That was primarily a conversation with
 11 Bill Voller.
 12 Q. Okay. Did you take notes from that
 13 conversation?
 14 A. I don't believe I took written notes,
 15 no.
 16 Q. Okay. You said primarily a
 17 conversation. Was -- were there any written
 18 materials associated with that primer?
 19 A. Not that I specifically remember, but I
 20 believe that he would have directed me to either
 21 the '304 or '132 patent, and we'd walk through
 22 elements of the patent, things like that.
 23 Q. Okay. And did Mr. Voller talk to you
 24 about case law on written description or
 25 anything like that?

1 JOHN PHILLIP MELLOR, Ph.D.
 2 BY MR. SAMPSON:
 3 Q. Okay. What would be required in the
 4 patent, in your view, for it to cover a chair
 5 with more than four legs?
 6 MR. VOLLER: Form. Scope. Incomplete
 7 hypothetical.
 8 THE WITNESS: You know, again, this is -- you
 9 know, the written description analysis I think
 10 is a pretty -- I certainly put a lot effort and
 11 a lot of thought into it. And it's -- it's a
 12 little difficult, I think, to kind of do it on
 13 the fly with an example that I haven't thought
 14 about before.
 15 You know, so I'm a little
 16 uncomfortable, you know, just kind of doing that
 17 on the fly.
 18 BY MR. SAMPSON:
 19 Q. I want to ask you some -- let's turn to
 20 your declaration, PDX 2362. And if you could
 21 turn to page four, paragraph seven, are you with
 22 me?
 23 A. Page four, paragraph seven?
 24 Q. Yeah. In paragraph seven, it says that
 25 "The CQG attorneys provided me with additional

1 JOHN PHILLIP MELLOR, Ph.D.
 2 A. Not that I remember specifically, no.
 3 Q. I think you testified earlier this
 4 morning that in your other activities as an
 5 expert witness prior to this, you've never
 6 previously provided opinions on the subject of
 7 written description. Is that right?
 8 A. I believe that's correct.
 9 Q. Okay. So in terms of educating
 10 yourself as to the legal requirements for the
 11 written description analysis, did you undertake
 12 any independent research?
 13 MR. VOLLER: Form.
 14 THE WITNESS: By "independent research," do
 15 you mean did I go out and look something up in
 16 the library or --
 17 BY MR. SAMPSON:
 18 Q. Sure.
 19 A. No, I -- I -- I did not do that.
 20 Q. Okay. You were relying exclusively on
 21 the CQG attorneys for that information?
 22 A. I think it's fair to say that I was
 23 relying primarily on that. You know, I said
 24 I've had a general experience with -- with
 25 patent law from my professional experiences.

1 JOHN PHILLIP MELLOR, Ph.D.
 2 I'm a named inventor on a patent and -- and I
 3 have some sense of what I was required to -- to
 4 write down in preparing materials for that
 5 patent.
 6 Q. Okay. So other than things you learned
 7 in the course of your own work in preparing your
 8 patent application and your conversations with
 9 the CQG's attorneys -- with CQG's attorneys,
 10 excuse me, did you do anything else to acquaint
 11 yourself with the written description
 12 requirements?
 13 A. Not that I can remember, no.
 14 Q. Okay. Do you believe that the written
 15 description law requires somebody who is
 16 preparing a patent application to describe
 17 unclaimed features?
 18 MR. VOLLER: Form. Scope. Relevance.
 19 THE WITNESS: I'm -- I'm not -- I'm not sure
 20 what you mean by describing unclaimed features.
 21 I'm not -- I'm not sure what -- what -- what you
 22 mean by that.
 23 BY MR. SAMPSON:
 24 Q. Do -- do you have an understanding of
 25 what a -- I understand you're not a patent

1 JOHN PHILLIP MELLOR, Ph.D.
 2 understanding is that I'm here today to answer
 3 questions regarding my opinion on written
 4 description. And you seem to be describing a
 5 situation where we're talking about
 6 infringement, which is -- which is different
 7 from the analysis that I did here.
 8 BY MR. SAMPSON:
 9 Q. Right. If that was your impression, I
 10 didn't mean to convey that. I'm -- I am talking
 11 about written description.
 12 So if -- if a competitor wanted to use
 13 your patented invention and they modified it to
 14 include an additional feature, is it your
 15 understanding that your written description of
 16 your patent would need to include a description
 17 of that feature in order for your patent claims
 18 to be valid?
 19 MR. VOLLER: Form. Scope. Incomplete
 20 hypothetical.
 21 THE WITNESS: Again, I'm -- I'm trying to
 22 give you the most accurate answer I can and --
 23 and be helpful in answering your questions. But
 24 I'm -- I'm still confused.
 25

1 JOHN PHILLIP MELLOR, Ph.D.
 2 attorney. But do you have a general
 3 understanding of what a patent claim is?
 4 MR. VOLLER: Form. Scope.
 5 THE WITNESS: I have a general understanding
 6 of what a patent claim is, yes.
 7 BY MR. SAMPSON:
 8 Q. Okay. And do you know that patent
 9 claims generally have elements, that they list
 10 elements of the invention that the patent
 11 applicant is seeking to protect?
 12 MR. VOLLER: Form. Scope.
 13 THE WITNESS: I understand that generally,
 14 yes.
 15 BY MR. SAMPSON:
 16 Q. And if -- if a competitor in your
 17 industry wanted to take your invention and add
 18 some feature to it and use it in that modified
 19 way, do you believe that for your patent to be
 20 valid you would have to describe that additional
 21 modification?
 22 MR. VOLLER: Form. Scope. Incomplete
 23 hypothetical.
 24 THE WITNESS: I -- I'm a little confused
 25 by -- by this question because I -- my

1 JOHN PHILLIP MELLOR, Ph.D.
 2 BY MR. SAMPSON:
 3 Q. Okay.
 4 A. Because as soon as you start mentioning
 5 a competitor and some other product, that starts
 6 to sound like infringement and different from
 7 written description analysis to me.
 8 Q. Okay. Let me try it another way.
 9 If -- let's talk about the -- the claims of TT's
 10 patents. And you have independent claims in
 11 your expert report and declaration, right? All
 12 right.
 13 So if TT's claims do not require
 14 nonstatic zones in a price column -- are you
 15 with me?
 16 A. I'm trying to follow you.
 17 Q. Okay. So the claims do not -- assume
 18 that the claims do not require nonstatic zones
 19 in the -- in the price column. Okay? Do you
 20 believe that the specification needs to provide
 21 written description support for nonstatic zones?
 22 MR. VOLLER: Form. Scope. Incomplete
 23 hypothetical.
 24 THE WITNESS: Again, that seems to be --
 25 I'm -- I'm having trouble rectifying this notion

1 JOHN PHILLIP MELLOR, Ph.D.
 2 of require, which sounds like an infringement
 3 analysis to me from written description, which
 4 in my understanding is different.
 5 BY MR. SAMPSON:
 6 Q. In your understanding of written
 7 description analysis, you don't have to look at
 8 what the claims require? That's not part of the
 9 analysis?
 10 MR. VOLLER: Form. Scope.
 11 THE WITNESS: As I already explained, I
 12 looked at the -- the words in the claims and the
 13 analysis that I performed, as described in my
 14 report here, it looks closely at the words that
 15 are in -- in the claims and analyzes whether
 16 there's written description support for a price
 17 column where all of the prices are static or
 18 whether there's written description support for
 19 a price column where only some of the prices are
 20 static.
 21 BY MR. SAMPSON:
 22 Q. In -- in your analysis of the
 23 independent claims to TT's patents, did you
 24 conclude at any time that the claims require a
 25 nonstatic price axis or a nonstatic zone?

1 JOHN PHILLIP MELLOR, Ph.D.
 2 nonstatic zone?
 3 MR. VOLLER: Form. Scope. Asked and
 4 answered.
 5 THE WITNESS: Again, that starts to sound
 6 like an infringement analysis, what the claims
 7 require. And that's -- I'm not -- my
 8 understanding is I'm not here today to do that.
 9 I might have an opinion about that in the
 10 future. But I'm -- I'm not prepared to discuss
 11 that today.
 12 BY MR. SAMPSON:
 13 Q. So as part of your analysis, you did
 14 not determine what the claims require?
 15 MR. VOLLER: Form. Scope. Asked and
 16 answered.
 17 THE WITNESS: I -- I think I've -- I've
 18 answered that, that I said the written
 19 description analysis that I did looked at
 20 whether there was written description support
 21 for a price column where all prices are static
 22 or whether there was written description support
 23 for a price column where only some of the prices
 24 are static.
 25

1 JOHN PHILLIP MELLOR, Ph.D.
 2 MR. VOLLER: Form. Scope. Asked and
 3 answered.
 4 THE WITNESS: Again, I'm -- I'm confused by
 5 the way you're using this word "required."
 6 That -- again, that sounds like an infringement
 7 analysis. And I'm -- I'm here today just to
 8 answer questions about my written description
 9 analysis.
 10 BY MR. SAMPSON:
 11 Q. Okay. Let's take the word "require"
 12 out and we'll just say "recite."
 13 In your analysis of the TT patent
 14 independent claims, did you ever conclude that
 15 the patent claims recite a nonstatic zone for
 16 the price axis?
 17 MR. VOLLER: Form. Scope.
 18 THE WITNESS: I'm -- I'm trying to -- I'm
 19 trying to understand and trying to answer your
 20 questions. But substituting the word "recite"
 21 for "required" doesn't make -- you know, doesn't
 22 help me.
 23 BY MR. SAMPSON:
 24 Q. Do -- do you have an understanding of
 25 whether the claims do or do not recite a

1 JOHN PHILLIP MELLOR, Ph.D.
 2 BY MR. SAMPSON:
 3 Q. Okay. Did -- did -- putting that
 4 written description analysis to the side, did
 5 you do any other written description analysis of
 6 the claims for the patents-in-suit?
 7 MR. VOLLER: Form. Scope.
 8 THE WITNESS: I did a -- I did a written
 9 description analysis of a sort of single mode
 10 versus multi-mode.
 11 BY MR. SAMPSON:
 12 Q. Okay.
 13 A. But it's my understanding that I'm not
 14 here today to answer questions about that
 15 opinion.
 16 Q. Okay. So we'll put aside your written
 17 description analysis on single mode versus
 18 multi-mode, and we'll put aside your written
 19 description analysis on whether there's written
 20 description support for some, but not all, of
 21 the prices being static.
 22 Did you do any other written
 23 description analysis of any kind for the -- for
 24 the independent claims of the patents?
 25 MR. VOLLER: Form. Scope.

1 JOHN PHILLIP MELLOR, Ph.D.
 2 THE WITNESS: Again, it's my understanding
 3 that I'm here today just to answer questions
 4 about my opinion on the -- the -- the written
 5 description support for a price column that
 6 either has all prices static or only some of the
 7 prices static.
 8 And in this report there aren't any
 9 other opinions regarding written description
 10 analysis other than the two that -- that you've
 11 mentioned.
 12 BY MR. SAMPSON:
 13 Q. Okay. And when you say "this report,"
 14 are you referring to 2365?
 15 A. Yeah.
 16 Q. PDX 2365?
 17 A. I'm referring to the expert report,
 18 2365, yes.
 19 Q. And with respect to PDX 2362, the
 20 declaration on the summary judgment motion, that
 21 only addresses your written description analysis
 22 with respect to whether some, but not all, of
 23 the price levels are static; is that correct?
 24 MR. VOLLER: Form.
 25 THE WITNESS: The declaration only includes

1 JOHN PHILLIP MELLOR, Ph.D.
 2 What does that mean to you?
 3 MR. VOLLER: Form. Scope.
 4 THE WITNESS: So as I described in this same
 5 declaration later, when I summarized my
 6 understanding of the patent law, my
 7 understanding is that the written description
 8 requirement exists to prevent a patent owner
 9 for -- from overreaching his invention. And so
 10 one mechanism of that overreach may be how that
 11 patent owner tries to assert that patent against
 12 others.
 13 BY MR. SAMPSON:
 14 Q. Okay. And that's what I was trying to
 15 figure out. So sometimes when you say A or B,
 16 those are two synonyms. Sometimes they're
 17 different -- substantive differences.
 18 And so my question was: Is as claimed
 19 different than as asserted against others, or do
 20 they have the same meaning to you?
 21 MR. VOLLER: Form. Scope.
 22 THE WITNESS: Again, I'm -- I'm not a lawyer.
 23 And I'm not sure I'm -- you know, I'm totally
 24 comfortable going through some of these nuances.
 25

1 JOHN PHILLIP MELLOR, Ph.D.
 2 my written description opinions on the price
 3 column where all price -- prices are static or
 4 whether there's written description support for
 5 a price column with only some.
 6 BY MR. SAMPSON:
 7 Q. Okay. Okay. And -- okay.
 8 If you turn to -- I'm looking now at
 9 the declaration in support of summary judgment,
 10 PDX 2362. Looking at paragraph five, we looked
 11 at this a little bit earlier.
 12 But do you see in the middle of the
 13 paragraph -- well, the first sentence -- I'll
 14 just read the first sentence. It says "CQG
 15 attorneys also explained to me that the patent
 16 law requires the inventor to have demonstrated
 17 at the time of the filing date of the patent
 18 application that he was in actual possession of
 19 the invention as claimed or asserted against
 20 others."
 21 Do you see that?
 22 A. Yes, I see that.
 23 Q. Okay. And -- and I want to focus on
 24 the -- the very last clause of the sentence, the
 25 "as claimed or asserted against others."

1 JOHN PHILLIP MELLOR, Ph.D.
 2 BY MR. SAMPSON:
 3 Q. But this is your report, right? These
 4 are your words?
 5 A. They -- they are. And so that what's
 6 written there reflects what my understanding of,
 7 you know, the -- of that written description
 8 requirement.
 9 Q. And -- and -- okay. I'll just tell you
 10 the way that I took it and you can tell me if
 11 I'm incorrect.
 12 I took it as that there are two
 13 requirements, that you need to be in actual
 14 possession of the invention as claimed and as
 15 asserted against others. Is that incorrect?
 16 MR. VOLLER: Form. Scope.
 17 BY MR. SAMPSON:
 18 Q. Or is it either or?
 19 MR. VOLLER: Form. Scope.
 20 THE WITNESS: Again, I think that's -- that
 21 that's getting into an illegal -- a legal arena
 22 that I'm a little bit uncomfortable --
 23 BY MR. SAMPSON:
 24 Q. Okay.
 25 A. -- you know, sort of speculating about.

1 JOHN PHILLIP MELLOR, Ph.D.
2 Q. So just to make the record clear, this
3 phrase about asserted against others, you,
4 sitting here today, don't know if that has a
5 different meaning than claimed in this sentence?
6 MR. VOLLER: Form. Scope. Asked and
7 answered.
8 THE WITNESS: I think they -- they are
9 different. But, again, like I said, I think you
10 asked -- I think I heard you ask whether it had
11 to be both or one or the other.
12 BY MR. SAMPSON:
13 Q. Okay.
14 A. And -- and that's -- that's probably
15 getting a little more nuanced than I'm
16 comfortable.
17 Q. Okay. Let's -- let's talk about the
18 differences then. Can you identify differences
19 for me, or are you able to do that?
20 MR. VOLLER: Form. Scope.
21 THE WITNESS: Again, I think I'm a little
22 uncomfortable. That's a little more on the
23 legal side of things than -- than what my
24 understanding of what I'm here to answer
25 questions for.

1 JOHN PHILLIP MELLOR, Ph.D.
2 that's -- that's a legal question that's beyond
3 what I did.
4 BY MR. SAMPSON:
5 Q. Okay. And following on the legal
6 theme, you mentioned before this concept of
7 overreaching, right? Do you remember mentioning
8 where you overreach your patent?
9 A. I do remember mentioning that, yes.
10 Q. Okay. You have -- you haven't formed
11 any opinion that TT is overreaching in this
12 case, have you?
13 MR. VOLLER: Form. Scope.
14 THE WITNESS: I haven't -- I haven't looked
15 at -- I haven't finalized any opinions about
16 infringement or -- or that -- that kind of thing
17 yet.
18 BY MR. SAMPSON:
19 Q. Well, sitting here today, are you of
20 the opinion that -- well, you've mentioned
21 overreaching. Is overreaching a basis in any
22 way -- strike that. Let me start over.
23 Do you believe that whether or not
24 there has been any overreaching in this case has
25 any relevance to the written description

1 JOHN PHILLIP MELLOR, Ph.D.
2 BY MR. SAMPSON:
3 Q. Okay. Okay. And -- and if the judge
4 in this -- in this case tells CQG's attorneys
5 and tells us that the manner in which the
6 patents are asserted against others is
7 irrelevant to written description, will that
8 affect your opinion?
9 MR. VOLLER: Form. Scope. Incomplete
10 hypothetical.
11 THE WITNESS: So I'm not entirely clear what
12 you mean by the judge makes this decision how
13 that would work or how that plays in.
14 As far as my analysis goes, I'm -- I'm
15 not sure how that would have an impact. I'd
16 have to see the details of -- of what that
17 change was.
18 But my analysis simply looks at whether
19 there's written description support for price
20 axis where all prices are static or whether
21 there is written description support for price
22 axis where only some of the prices are static.
23 And what happens with that written
24 description support or what consequences that
25 lack of written description support may have

1 JOHN PHILLIP MELLOR, Ph.D.
2 inquiry?
3 MR. VOLLER: Form. Scope.
4 THE WITNESS: So my analysis simply looks at
5 whether there is written description support for
6 a price column with all prices static or whether
7 there is written description support for a price
8 column where only some of the prices are static.
9 And that doesn't look at -- overreach
10 didn't figure into -- doesn't figure into that
11 analysis. Either there is support for it or
12 not.
13 BY MR. SAMPSON:
14 Q. Okay. Okay. I was unclear because --
15 and I don't want to bring in the infringement
16 side, and we're not asking you about that today.
17 But when you said -- I thought you said
18 before that one of the functions of the written
19 description requirement was to prevent
20 overreaching, and I was just simply asking
21 whether you have come to an opinion about
22 overreaching in this case.
23 MR. VOLLER: Form. Scope. Mischaracterizes
24 his previous testimony.
25 THE WITNESS: I think I understand your --

1 JOHN PHILLIP MELLOR, Ph.D.
 2 your confusion and -- and let me be clear.
 3 My -- my analysis focused on the
 4 written description analysis. How that written
 5 description analysis is used is -- is not -- was
 6 not my focus. That's -- that's beyond.
 7 And, no, I haven't come to -- I don't
 8 hold currently any opinion on how that written
 9 description should be used or what the result of
 10 that should -- or the consequences, I guess, in
 11 a -- in a legal arena should be.
 12 BY MR. SAMPSON:
 13 Q. Okay. Okay. I want to finish up. I'm
 14 still looking at the declaration, PDX 2362. And
 15 we looked at page four, paragraph seven, about
 16 legal principles.
 17 Following the heading of that section,
 18 it says Roman Numeral V, "Understanding of the
 19 Patent Law." And paragraphs eight and nine and
 20 ten and 11 and 12 all start with the phrase "I
 21 understand that."
 22 MR. VOLLER: Form.
 23 BY MR. SAMPSON:
 24 Q. Do you see that?
 25 A. I do see that.

1 JOHN PHILLIP MELLOR, Ph.D.
 2 The -- the -- I mean, I guess I'm
 3 confused a little bit about your question.
 4 BY MR. SAMPSON:
 5 Q. Okay. I'm confused by that answer.
 6 It seems to me that if -- if you
 7 were -- if I was doing a written description
 8 analysis and somebody was explaining the written
 9 description law to me, I would want to feel
 10 comfortable that they were giving me a complete
 11 explanation of the written description law.
 12 And so my question to you is did you
 13 feel that CQG was giving you a -- CQG's
 14 attorneys were giving you a complete explanation
 15 of the written description law in order for you
 16 to prepare your expert report and this
 17 declaration?
 18 MR. VOLLER: Form.
 19 THE WITNESS: So your -- I'm a little
 20 confused by what you mean by a complete
 21 description of the written description law, and
 22 -- and maybe that's a little bit of a difference
 23 because you're a lawyer and I'm an engineer.
 24 The -- the -- my understand -- what
 25 I -- what I needed to understand in order to

1 JOHN PHILLIP MELLOR, Ph.D.
 2 Q. Okay. So -- so my question is, is your
 3 understanding on each of these points coming
 4 from the CQG attorneys?
 5 MR. VOLLER: Form.
 6 BY MR. SAMPSON:
 7 Q. Or -- or do you have some independent
 8 knowledge on these levels?
 9 MR. VOLLER: Form.
 10 THE WITNESS: I would say that the --
 11 certainly my most recent refreshing is -- is
 12 from CQG attorneys. I've certainly encountered
 13 these terms before in my -- you know, in my
 14 professional experience.
 15 But, again, I'm not a lawyer, and I
 16 don't -- I'm -- I'm not really comfortable with
 17 all of these terms.
 18 BY MR. SAMPSON:
 19 Q. Were you relying on the CQG attorneys
 20 to be complete as far as explaining to you the
 21 legal requirements for written description
 22 analysis?
 23 MR. VOLLER: Form.
 24 THE WITNESS: I don't know that I made an
 25 assumption one way or another.

1 JOHN PHILLIP MELLOR, Ph.D.
 2 perform an accurate and correct written
 3 description analysis I believe CQG's attorneys
 4 provided me.
 5 I don't think that requires a complete
 6 understanding of the legal consequences of lack
 7 of written description or those kinds of things.
 8 BY MR. SAMPSON:
 9 Q. Did you rely on the CQG attorneys to
 10 give you the legal principles that you required
 11 to do your analysis for written description?
 12 MR. VOLLER: Form.
 13 THE WITNESS: I think that's probably a fair
 14 characterization. I probably had some -- I
 15 think -- as I stated before, I think I have some
 16 understanding of the -- what the written
 17 description is there for and -- but I relied on
 18 CQG's attorneys to confirm that and -- and make
 19 sure that understanding was correct.
 20 BY MR. SAMPSON:
 21 Q. Okay. In -- in paragraph nine of your
 22 declaration, you're talking about your
 23 understanding with respect to some activities at
 24 the U.S. Patent and Trademark Office; is that
 25 right?

1 JOHN PHILLIP MELLOR, Ph.D.
 2 A. That's correct.
 3 Q. And the second sentence says "The
 4 examiner is an employee of the U.S. Patent and
 5 Trademark Office who reviews the application to
 6 determine if it meets all the requirements for
 7 patentability as determined by the patent law."
 8 Do you see that?
 9 A. I see that.
 10 Q. Okay. And is it your understanding
 11 that written description is one of those
 12 requirements for patentability that the patent
 13 examiner is responsible for checking into?
 14 MR. VOLLER: Form. Scope.
 15 THE WITNESS: I imagine -- again, I'm not a
 16 lawyer. But I imagine that that's a component
 17 of it. But as we were just talking about the --
 18 you know, with the written description -- where
 19 was it? -- in paragraph five where it mentions
 20 possession of the invention as claimed or as
 21 asserted against others, it seems to me that at
 22 least part of that analysis can't be -- it may
 23 arise in a situation where the patent office
 24 can't -- can't do it.
 25

1 JOHN PHILLIP MELLOR, Ph.D.
 2 their patents that are different that -- than,
 3 you know, maybe a person of ordinary skill would
 4 understand them, and -- and that's why they
 5 explicitly define them.
 6 BY MR. SAMPSON:
 7 Q. So -- so one exception would be
 8 explicit definition in the patent itself
 9 could -- you could give a different definition
 10 than the plain and ordinary meaning might
 11 otherwise be?
 12 MR. VOLLER: Form. Scope.
 13 THE WITNESS: Correct.
 14 BY MR. SAMPSON:
 15 Q. Okay. Are there any other exceptions
 16 that you can think of as you're sitting here
 17 now?
 18 MR. VOLLER: Form. Scope.
 19 THE WITNESS: I'm sure there are others, but
 20 I guess not that pop into my mind. But if you
 21 want me to think about it for a while, I -- I
 22 might come up with some others.
 23 BY MR. SAMPSON:
 24 Q. Did you -- did you have anything else
 25 in mind when you wrote this in March of 2014?

1 JOHN PHILLIP MELLOR, Ph.D.
 2 BY MR. SAMPSON:
 3 Q. Okay. In -- in paragraph ten, are you
 4 with me on paragraph ten? And -- and, again,
 5 we're still here in your declaration, 2362,
 6 right?
 7 A. I see paragraph ten, yes.
 8 Q. Okay. In the first sentence, you say
 9 that "I understand that the claim words are
 10 generally given their plain and ordinary meaning
 11 as understood by a person of ordinary skill in
 12 the art." Right?
 13 A. I see that, yes.
 14 Q. Okay. And so I'm going to ask you
 15 about the word "generally." Are -- are there
 16 exceptions that you're aware of?
 17 MR. VOLLER: Form. Scope.
 18 BY MR. SAMPSON:
 19 Q. Why did you use the word "generally" in
 20 your declaration?
 21 MR. VOLLER: Form. Scope.
 22 THE WITNESS: Well, I think that's accurate,
 23 that most of the time that's the way the words
 24 are construed. I understand that patentees
 25 might explicitly give definition to the words in

1 JOHN PHILLIP MELLOR, Ph.D.
 2 MR. VOLLER: Form and scope.
 3 THE WITNESS: I don't think I had anything
 4 specific other than that this is sort of the
 5 general process of how the words in the claims
 6 are interpreted.
 7 BY MR. SAMPSON:
 8 Q. Okay. And then I'm going to ask you
 9 the same questions about the following
 10 paragraph. You use the word "generally" again.
 11 And it says, you know, "Once a court
 12 interprets a particular claim word, that
 13 construction is generally used by the parties
 14 and the court to determine if the claims are
 15 valid and/or infringed."
 16 And as you're preparing your
 17 declaration, I'd like to know whether you had
 18 any exceptions in mind to that generalization.
 19 MR. VOLLER: Form. Scope.
 20 THE WITNESS: I don't know that I had a -- a
 21 specific thing -- you know, specific situation
 22 in mind. I understand that from time to time
 23 claim constructions change and -- and there must
 24 be some mechanism for that.
 25 So somewhere along the way somebody

1 JOHN PHILLIP MELLOR, Ph.D.
 2 must have said I don't agree with that, and then
 3 there was a change.
 4 BY MR. SAMPSON:
 5 Q. Okay. But, you know, you would
 6 endeavor as an expert in a case to apply claim
 7 constructions given by the judge in that case?
 8 Would that be your goal?
 9 A. I think that's --
 10 MR. VOLLER: Form and scope.
 11 THE WITNESS: I think that's a -- that's a
 12 fair characterization.
 13 BY MR. SAMPSON:
 14 Q. And moving to the -- the next
 15 paragraph, paragraph 12, the second sentence
 16 says "During prosecution, the written
 17 description requirement prevents the patent
 18 applicant from presenting claims or amending
 19 claims that cover an invention different than
 20 the invention they actually possessed when the
 21 application was filed."
 22 Do you see that?
 23 A. I do.
 24 Q. And do you have an understanding of
 25 what you meant when you said "cover" in your

1 JOHN PHILLIP MELLOR, Ph.D.
 2 and you said the invention that is claimed needs
 3 to be described in the specification. So I'm --
 4 that's -- I'm just -- I'm trying to confirm that
 5 by cover you mean the claim -- the invention
 6 that you're claiming is described in the patent
 7 application.
 8 MR. VOLLER: Form. Scope.
 9 BY MR. SAMPSON:
 10 Q. Is that what you're -- if I'm wrong,
 11 let me know.
 12 A. I'm -- I'm not sure that that's exactly
 13 what I'm -- what I'm trying to convey there. So
 14 my -- my understanding, again, that's recited
 15 here in paragraph 12 is that the claims need to,
 16 I guess, I don't know, cover.
 17 That -- and that's, you know -- gets
 18 more into that infringement thing that we were
 19 talking about earlier. You know, the range of
 20 inventions that are sort of covered by the
 21 claims needs to match up with the written
 22 description.
 23 Q. Okay. And I think that aspect of it is
 24 carried in -- carried forward in the next
 25 instance of the word cover. If you look down to

1 JOHN PHILLIP MELLOR, Ph.D.
 2 declaration?
 3 MR. VOLLER: Form.
 4 THE WITNESS: I -- I think I have a general
 5 understanding of that.
 6 BY MR. SAMPSON:
 7 Q. And what is that understanding?
 8 A. That the invention in the claims needs
 9 to also be the invention that's described in
 10 the -- in the disclosure. That's the written
 11 description part.
 12 Q. And -- sorry. My computer monitor is
 13 going off over here.
 14 So when you say "cover," you're
 15 referring to the relationship between the
 16 invention as claimed and the invention that's
 17 described in the patent application; is that
 18 right?
 19 MR. VOLLER: Form. Scope.
 20 THE WITNESS: I'm -- I'm a little unclear
 21 what you -- can you run that question by me one
 22 more time?
 23 BY MR. SAMPSON:
 24 Q. Okay. So I was just asking what your
 25 understanding was of "cover" in paragraph 12,

1 JOHN PHILLIP MELLOR, Ph.D.
 2 the next sentence, you say "During the
 3 litigation, the written description could
 4 invalidate a patent where the claims or the
 5 owner's interpretation of those claims overreach
 6 to cover an invention different than the
 7 invention they actually possessed when the
 8 application was filed."
 9 Right?
 10 A. Correct. So I think it's consistent
 11 there with the patent examiner looking at it
 12 during patent prosecution, and then you still
 13 need to meet the written description requirement
 14 later as well.
 15 Q. Later as well, but it has a view
 16 towards what the claims cover in an infringement
 17 context?
 18 MR. VOLLER: Form. Scope.
 19 THE WITNESS: That's not what I said.
 20 BY MR. SAMPSON:
 21 Q. Okay.
 22 A. I -- again, this is -- this is a legal
 23 aspect of -- of the patent, and I'm merely
 24 reciting my understanding of it.
 25 The details of how that written

1 JOHN PHILLIP MELLOR, Ph.D.
2 description or the consequences of it with
3 regard to the patent is beyond the scope of my
4 analysis in this declaration.

5 Q. Okay. And where did you get the
6 understanding about the requirements of the
7 written description requirement in the
8 litigation reflected in paragraph 12 of your
9 declaration?

10 A. Primarily from CQG attorneys. But I --
11 I think, as I've mentioned before, I had some
12 exposure to these ideas from my professional
13 experience even though I'm not a lawyer.

14 Q. Okay. Just to clarify, when -- when --
15 when were you going through that process with
16 your own invention? When was that?

17 MR. VOLLER: Form.

18 THE WITNESS: Let's see. I think the actual
19 patent is an exhibit to my report, and we can
20 look that up, if we need.

21 But it was in the early 2000s.

22 BY MR. SAMPSON:

23 Q. Okay. Okay. That's fine. Why don't
24 we take a -- a lunch break.

25 A. If it would be okay --

1 JOHN PHILLIP MELLOR, Ph.D.

2 And your declaration, I believe, identifies that
3 the -- the majority of the specification for the
4 two patents is identical. Is that right?

5 A. That's correct.

6 Q. So I don't know if you have a
7 preference of one patent or the other to use for
8 this discussion. If not, we'll just use the
9 '304, which is Exhibit 2. Is that okay?

10 A. That's fine.

11 Q. Okay. The '132, if you want to refer
12 to it, is Exhibit 3, right behind. And in -- in
13 the course of you -- if you could turn to the
14 patent, the '304 patent, which is Exhibit 2 to
15 Exhibit 2362.

16 And your declaration includes some
17 analysis of the description that relates to
18 figures three through five; is that correct?

19 MR. VOLLER: Form.

20 THE WITNESS: My declaration discusses
21 figures three through five, that's correct.

22 BY MR. SAMPSON:

23 Q. Okay. And -- and as part of your
24 analysis, did you determine that figures three
25 through five describe a -- a window with a range

1 JOHN PHILLIP MELLOR, Ph.D.

2 MR. SAMPSON: Sorry.

3 THE WITNESS: If it would be okay, I'd -- I'd
4 prefer to take a short break and then continue
5 on and get lunch a little later.

6 MR. SAMPSON: We can talk about it after he
7 goes off, but, yeah, I agree.

8 THE VIDEOGRAPHER: It is the end of Tape
9 No. 2 of the testimony of Dr. Mellor. It is
10 12:13 p.m. We will go off the record.

11 (Whereupon, a recess was had at

12 12:13 p.m., after which the

13 deposition was resumed at

14 12:36 p.m. as follows:)

15 THE VIDEOGRAPHER: It is the beginning of
16 Tape No. 3 of the testimony of Dr. Mellor. It
17 is 12:36 p.m. We are back on the record.

18 BY MR. SAMPSON:

19 Q. Okay. Dr. Mellor, I want to -- we're
20 still going to be asking about PDX 2362, okay,
21 which is your declaration in support of the
22 motion for summary judgment.

23 And I want to ask you some questions
24 about your written description analysis. Okay?
25 And we're going to focus on the patents-in-suit.

1 JOHN PHILLIP MELLOR, Ph.D.

2 of prices?

3 MR. VOLLER: Form. Scope.

4 THE WITNESS: What I determined is, as
5 described in -- in my declaration, is that
6 figure two -- or, I mean, excuse me, figure
7 three, four, and five, the prices are described
8 with the term "price column."

9 BY MR. SAMPSON:

10 Q. Okay. And -- and you observed that --
11 well, so you reviewed -- sorry. Strike that.

12 In conducting your written description
13 analysis, you reviewed the '304 patent, correct?

14 A. I did review the '304 patent in
15 conducting my written description analysis.

16 Q. And in doing that analysis, did you
17 observe that the patent describes a range of
18 price levels in respect to figure three?

19 MR. VOLLER: Form. Scope.

20 THE WITNESS: Again, the patent describes the
21 prices in figure three as a price column.

22 BY MR. SAMPSON:

23 Q. Okay. And is it a range of price
24 levels in figure three?

25 MR. VOLLER: Form.

1 JOHN PHILLIP MELLOR, Ph.D.
 2 THE WITNESS: Well, I'm telling you how
 3 the -- the patent itself describes it, as a
 4 price column and as a column containing prices.
 5 BY MR. SAMPSON:
 6 Q. Okay. And is there a range of prices
 7 in that column?
 8 MR. VOLLER: Form.
 9 THE WITNESS: I'm not sure what you mean by a
 10 "range of prices."
 11 BY MR. SAMPSON:
 12 Q. Really? Are there -- is there more
 13 than one price?
 14 A. There are more than one price, yes.
 15 Q. Okay. Is it -- is -- how many price
 16 levels -- does it matter how many price levels
 17 are in the column --
 18 MR. VOLLER: Form.
 19 BY MR. SAMPSON:
 20 Q. -- to your analysis?
 21 A. As described in my analysis, all of the
 22 prices in the column make up the column.
 23 Q. Okay. If -- if it was a column of
 24 three price levels, is that okay?
 25 MR. VOLLER: Form. Scope.

1 JOHN PHILLIP MELLOR, Ph.D.
 2 it looks like it has 19 prices in that column.
 3 Q. Okay. And in reading this -- the
 4 disclosure of the '304 patent, do you think that
 5 the disclosure provides support for a claim that
 6 would be broad enough to cover a display that
 7 only had ten price levels?
 8 MR. VOLLER: Form. Scope.
 9 THE WITNESS: Again, you know, you're using
 10 this word "cover". And, you know, I'm not a
 11 lawyer. I'm not a patent lawyer. And I'm a
 12 little confused about this -- this cover.
 13 BY MR. SAMPSON:
 14 Q. Okay. You had it in your declaration
 15 and in your report, the word "cover". So I'm
 16 trying to use it in the same way.
 17 A. Again, I --
 18 MR. VOLLER: Form. Scope.
 19 THE WITNESS: I -- you know, I explained that
 20 that was my understanding of what CQG attorneys
 21 explained to me. And, you know, I'm not really
 22 comfortable and I didn't think I was here to
 23 answer questions about cover, but about -- and
 24 infringement issues, but instead to answer
 25 questions about my written description analysis.

1 JOHN PHILLIP MELLOR, Ph.D.
 2 THE WITNESS: I think you need a little more
 3 information. If the column only contained three
 4 prices, I wouldn't see anything wrong with that.
 5 BY MR. SAMPSON:
 6 Q. I'm -- I'm just trying to see, you
 7 know, in your analysis about -- whether all of
 8 the price levels in the description need to be
 9 static or some but not all, that's the context
 10 for this -- this discussion.
 11 And so my question is did you observe,
 12 in reviewing the '304 patent, that the price
 13 column has static price levels?
 14 MR. VOLLER: Form.
 15 BY MR. SAMPSON:
 16 Q. In respect to figures three, four,
 17 five. I'm not talking about anything else in
 18 the patent.
 19 A. So in comparing figures three and four,
 20 it shows that the price column in figure three
 21 is unchanged in figure four.
 22 Q. Okay. And -- and how many price levels
 23 are shown in figures three and four?
 24 A. So the price column in figure three is
 25 identified as the entire column. But it has --

1 JOHN PHILLIP MELLOR, Ph.D.
 2 BY MR. SAMPSON:
 3 Q. Okay. And -- and I'm -- what I'm
 4 trying to determine is whether -- whether you
 5 looked at the full scope of the written
 6 description or whether you just looked for the
 7 element that you were asked to consider this
 8 some, but not all, price level being static.
 9 MR. VOLLER: Form.
 10 THE WITNESS: Full scope of -- of what?
 11 BY MR. SAMPSON:
 12 Q. Of the written description. Did you do
 13 that analysis?
 14 MR. VOLLER: Form.
 15 THE WITNESS: I'm -- I'm sorry. I'm
 16 confused. Full scope of the written
 17 description --
 18 BY MR. SAMPSON:
 19 Q. Have -- have you done any analysis to
 20 determine what the broadest claim is that this
 21 patent specification would be entitled to
 22 properly claim under the written description
 23 requirement?
 24 MR. VOLLER: Form. Scope.
 25 THE WITNESS: The broadest claim? I'm --

1 JOHN PHILLIP MELLOR, Ph.D.
 2 I'm -- I'm a little confused. You -- you're --
 3 are you asking me to identify claim number one,
 4 claim number --
 5 BY MR. SAMPSON:
 6 Q. No. I'm -- I'm not talking about the
 7 specific claims in the patent now. You -- let
 8 me take a step back.
 9 You -- you reviewed this entire patent
 10 from the perspective of one of ordinary skill in
 11 the art, right?
 12 MR. VOLLER: Form.
 13 THE WITNESS: I think that's correct.
 14 BY MR. SAMPSON:
 15 Q. Okay. And do you understand -- is it
 16 your understanding that this patent describes a
 17 display with price levels arranged in a column,
 18 in a price column?
 19 MR. VOLLER: Form.
 20 THE WITNESS: Well, the title of the patent
 21 is "Click based trading with intuitive grid
 22 display of market depth."
 23 BY MR. SAMPSON:
 24 Q. Right.
 25 A. So that's what -- that's what is

1 JOHN PHILLIP MELLOR, Ph.D.
 2 there's written description support for a price
 3 column where all the price levels are static; is
 4 that right?
 5 A. That's correct.
 6 Q. Okay. And -- and do you have an
 7 opinion as to whether that's the case?
 8 MR. VOLLER: Form. Scope.
 9 BY MR. SAMPSON:
 10 Q. Is there written -- let me restate the
 11 question so that it's clear.
 12 Is there written description support in
 13 the '304 patent and the '132 patent for a
 14 display having price levels in which all the
 15 price levels are static?
 16 MR. VOLLER: Form.
 17 THE WITNESS: So that conclusion is -- is
 18 written down in -- in my declaration.
 19 BY MR. SAMPSON:
 20 Q. Okay. And where are you referring just
 21 so that we're on the same page?
 22 A. Paragraph 108. And it very clearly
 23 says that the inventors were only in possession
 24 of a graphical user interface with a price
 25 column where all prices displayed in the column

1 JOHN PHILLIP MELLOR, Ph.D.
 2 described in the patent.
 3 Q. Have you determined whether as part of
 4 your analysis whether the patent provides
 5 written description support for a price column
 6 with only ten levels?
 7 MR. VOLLER: Form.
 8 THE WITNESS: As -- as I've -- I've said very
 9 consistently, and I'm not sure how to make it
 10 more clear, there -- the analysis that I
 11 performed was to determine whether there was
 12 written description support for a price column
 13 where all the prices were static or written
 14 description support for a price column where
 15 only some of the prices are static.
 16 BY MR. SAMPSON:
 17 Q. Sure.
 18 A. So I'm -- I'm not exactly sure how to
 19 answer your --
 20 Q. I'm sorry. I didn't mean to cut you
 21 off. You can finish.
 22 A. Yeah, I was confused by your question.
 23 Q. So -- okay. So let's talk about the
 24 written description analysis that you did. So
 25 one thing that you just mentioned was whether

1 JOHN PHILLIP MELLOR, Ph.D.
 2 are static.
 3 Q. Okay. And maybe you can walk me
 4 through the analysis that you did. How did you
 5 get to that conclusion? What did you do?
 6 A. Well, the steps of my analysis are --
 7 are recorded in -- in my declaration. Do you
 8 want me to -- to list all of them?
 9 Q. You could -- I mean, we don't have to
 10 go into the details of all the steps, but if you
 11 could just tell me what the steps are, that
 12 would be good.
 13 MR. VOLLER: Form.
 14 THE WITNESS: The -- the first thing I did
 15 was to -- to look at the patents themselves.
 16 BY MR. SAMPSON:
 17 Q. Okay.
 18 A. And when I looked at the patents
 19 themselves, I -- I started with the words that
 20 are in the claims. And then --
 21 Q. And what did you conclude from the
 22 patents themselves?
 23 MR. VOLLER: Form.
 24 BY MR. SAMPSON:
 25 Q. If anything.

1 JOHN PHILLIP MELLOR, Ph.D.
 2 MR. VOLLER: Form.
 3 THE WITNESS: Well, when I looked at the
 4 words of the claims, I concluded that they
 5 suggest that a person of ordinary skill in the
 6 art would understand that the inventors were
 7 only in possession of a line where all of the
 8 displayed prices are static.
 9 BY MR. SAMPSON:
 10 Q. Okay. And turning to Exhibits 2 or
 11 Exhibit 3, is there anything that you can
 12 identify for me, any statement, any express
 13 statement in the patent, that says that all of
 14 the price levels need to be static?
 15 MR. VOLLER: Form.
 16 THE WITNESS: Well, you just asked me what I
 17 did to come to that conclusion. Would you --
 18 that's not the same task --
 19 BY MR. SAMPSON:
 20 Q. Okay.
 21 A. -- what you just described. So I'm --
 22 I'm a little confused about how that fits.
 23 Q. Okay. Let's start with if you could
 24 answer my question, which is, is there anything
 25 in the patent, either patent, Exhibit 2 or

1 JOHN PHILLIP MELLOR, Ph.D.
 2 BY MR. SAMPSON:
 3 Q. Okay.
 4 A. What I said was that there was not
 5 written description support for anything other
 6 than that. And, in fact, the evidence indicates
 7 that the inventors were only in possession of a
 8 price column where all of the prices were
 9 static.
 10 Q. Okay.
 11 A. I did not say that the patent said,
 12 quote, all prices must be static.
 13 Q. No, I understand that. I understand
 14 that. You didn't say that.
 15 A. Okay.
 16 Q. I understand that. That we're
 17 connecting with.
 18 So with respect to moving beyond the
 19 fact that there's not an express statement that
 20 all of the price levels must be static, can you
 21 walk me through the parts of the patent that
 22 lead to your conclusion that the inventors were
 23 only in possession of a price axis where all the
 24 price levels are static?
 25 MR. VOLLER: Form.

1 JOHN PHILLIP MELLOR, Ph.D.
 2 Exhibit -- Exhibit 3, that expressly says that
 3 all of the price levels have to be static?
 4 A. There's nothing that says that in
 5 quotes like you just said. I think there's
 6 overwhelming evidence that that's exactly what
 7 the patent says.
 8 Q. Okay.
 9 A. And that's the analysis that's
 10 described.
 11 Q. And I want to just go stepwise through
 12 this so that we can have a clear record.
 13 So there's not an explicit statement in
 14 the patent that says all of the price levels
 15 must be static; is that correct?
 16 A. There's -- like I said, there's not a
 17 quotation that says all price levels must be
 18 static.
 19 Q. Okay. And -- but you, nonetheless,
 20 have concluded that the patents do tell that to
 21 a person of ordinary skill in the art, right, do
 22 tell a person of ordinary skill in the art that
 23 all price levels must be static, right?
 24 MR. VOLLER: Form.
 25 THE WITNESS: That's not what I said.

1 JOHN PHILLIP MELLOR, Ph.D.
 2 THE WITNESS: You want me to continue where I
 3 left off?
 4 BY MR. SAMPSON:
 5 Q. No. This is -- I want to focus on the
 6 patents now, the specification, the -- the
 7 written description and the drawings and the
 8 abstract and the original claims, if you want to
 9 refer to those.
 10 But which parts of the original patent
 11 filing are you relying on to say that the
 12 inventors were only in possession of a price
 13 axis in which all of the price levels are
 14 static?
 15 A. I'm -- I'm a little confused about --
 16 you gave a list of things, and those -- those
 17 are in or out?
 18 Q. I'm sorry. What -- what do you mean, a
 19 list of things?
 20 A. Can you ask me --
 21 Q. Oh, okay. So the patents. I want to
 22 focus on the patents.
 23 A. Understood.
 24 Q. So -- but if you think that you have to
 25 refer to the originally filed claims -- because

1 JOHN PHILLIP MELLOR, Ph.D.
2 they're not in the patents, right?
3 A. That's correct.
4 Q. So if -- if you need to refer to those,
5 we can go to that document as well.
6 But what I'm asking for is to -- for
7 you to identify explicitly the -- the portions
8 of the patents that you are relying on in
9 support of the conclusion that the inventors
10 were only in possession of a price axis in which
11 all the price levels are static?
12 A. I think I understand.
13 Q. Okay.
14 A. And -- and those specific pieces that I
15 rely on are spelled out in my declaration.
16 Q. Okay. Can you tell me what they are?
17 Maybe just list them for me, and then we'll go
18 into them in more detail.
19 A. Understood. The -- the claims of both
20 the '304 and '132 patent both suggest that the
21 inventors were only in possession of a line
22 where all displayed prices or all prices on the
23 axis are static.
24 Q. Okay. Okay. So the first thing that
25 you're relying on is the claims. Any -- any

1 JOHN PHILLIP MELLOR, Ph.D.
2 BY MR. SAMPSON:
3 Q. Anything else?
4 A. I also looked at the originally filed
5 claims.
6 Q. Right.
7 A. I looked at the --
8 Q. And, again, only tell me the things
9 that you're relying on for this conclusion,
10 okay, relying on to support your opinion. Do
11 you understand what I'm asking you?
12 A. I guess I'm not understanding the
13 distinction you're making --
14 Q. Yeah, let's start over then.
15 A. -- on -- on relying on.
16 Q. Hopefully it'll make it easier. You
17 have come to an opinion that the -- reviewing
18 this material the inventors were only in
19 possession of a -- of a display in which all of
20 the price levels are static, right?
21 A. That's --
22 MR. VOLLER: Form.
23 THE WITNESS: My conclusion is that there was
24 only written -- I found only written description
25 support for a price column where all of the

1 JOHN PHILLIP MELLOR, Ph.D.
2 particular claims or all the claims?
3 A. Well, my -- as described in -- in my
4 report, the claims -- there's a section in my
5 report that pulls out the -- the claims. And --
6 Q. If you can identify that, maybe it will
7 help the record.
8 A. So in paragraph 17 of my declaration,
9 it describes the independent claims of the
10 patent, and I took claim one as '304 as
11 representative of the two independent claims --
12 Q. Okay.
13 A. -- in the '304 patent.
14 Q. So we have the claims. You can
15 continue with the list. I'll go back and ask
16 you questions about the parts later.
17 A. Okay.
18 Q. So the claims are one piece.
19 A. And the remain -- I looked at the
20 remainder of the patent as well, so the
21 disclosure and the figures.
22 Q. Okay. We'll take those as two separate
23 pieces, the disclosure and the figures, but a
24 lot of times they are considered together.
25 MR. VOLLER: Form.

1 JOHN PHILLIP MELLOR, Ph.D.
2 prices were static.
3 BY MR. SAMPSON:
4 Q. Okay. And I want -- I'm asking you, if
5 you can, to identify the items in the claims in
6 the patent, in the figures, that you are relying
7 on for the conclusion that -- that the written
8 description only supports a display in which all
9 of the price levels are static.
10 MR. VOLLER: Form.
11 THE WITNESS: Okay. So, again, I looked at
12 the originally filed claims.
13 BY MR. SAMPSON:
14 Q. Okay. Are you relying on the
15 originally filed claims for your conclusion that
16 the patent -- the inventors were only in
17 possession of a price axis in which all the
18 price levels are static?
19 MR. VOLLER: Form.
20 THE WITNESS: Again, I'm a little
21 uncomfortable about what you mean by relied on
22 and how you're using that.
23 You know, I understand -- you know, CQG
24 attorneys told me that I didn't have to look at
25 those in order to do my written description

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1 JOHN PHILLIP MELLOR, Ph.D.
 2 analysis. But I looked at them anyway out of --
 3 out of curiosity as well as the -- the
 4 provisional application.
 5 BY MR. SAMPSON:
 6 Q. Okay. Is -- is there any way, as we're
 7 sitting here today, that you can tell me what
 8 you relied on specifically to support the
 9 conclusion that the inventors were not in
 10 possession of anything other than a price axis
 11 in which all of the levels are static?
 12 A. So I relied on the -- the patent
 13 itself.
 14 Q. Okay. And I need you to identify
 15 specifically what in the patent tells you that.
 16 A. The claims, the specification, and the
 17 figures.
 18 Q. Okay. Let's -- do you agree that the
 19 patent specification discloses a price column
 20 with a static zone?
 21 MR. VOLLER: Form. Scope.
 22 THE WITNESS: I -- I don't -- I'm not sure I
 23 understand what you mean by a price column with
 24 a static zone.
 25

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1 JOHN PHILLIP MELLOR, Ph.D.
 2 BY MR. SAMPSON:
 3 Q. You don't know what that is?
 4 A. I don't understand how you're using it.
 5 Q. Okay. Have you used that term before,
 6 static zone?
 7 A. I believe that I described what CQG
 8 explained to me about in describing TT's
 9 trifurcated analysis. I believe that was in my
 10 expert report.
 11 Q. Okay.
 12 A. I don't believe that is used in the
 13 declaration that we're looking at.
 14 Q. Right. Right. Do -- do you have an
 15 understanding of what you meant when you said
 16 static zone in that context, in the context of
 17 your expert report?
 18 MR. VOLLER: Form.
 19 THE WITNESS: Again, I was simply recording
 20 what CQG's lawyers explained to me. I didn't
 21 use static zones in -- in my written description
 22 analysis. So I -- I don't know exactly what
 23 that -- what that means. I haven't thought
 24 about that.
 25

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1 JOHN PHILLIP MELLOR, Ph.D.
 2 BY MR. SAMPSON:
 3 Q. What about -- let's go back to the
 4 things that you were relying on in support of
 5 your conclusion about the inventors only being
 6 in possession of this display where all of the
 7 price levels are static. Okay?
 8 You referenced the claims as -- as
 9 something that you were relying on; is that
 10 correct?
 11 MR. VOLLER: Form.
 12 THE WITNESS: That's correct.
 13 BY MR. SAMPSON:
 14 Q. Okay. And -- and so is there language
 15 in the claims that you can direct me to that
 16 you're relying on?
 17 A. The -- the analysis of the words that
 18 are in the claims and how that fails to provide
 19 written description support for a price column
 20 where only some of the prices are static and
 21 only provides written description support for a
 22 price column where all the prices are static,
 23 that's detailed over a number of pages in my
 24 report.
 25 Q. Which pages? You're talking

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1 JOHN PHILLIP MELLOR, Ph.D.
 2 specifically about the claims, right?
 3 A. That's correct.
 4 Q. Okay. Which pages of your declaration?
 5 You're talking about the declaration, right?
 6 Exhibit 2362?
 7 A. Correct.
 8 Q. Okay.
 9 A. So that would be pages 14 through 22.
 10 Q. Pages 14 through 22. Okay. And so are
 11 you referring to starting with paragraph 28 on
 12 page 14?
 13 A. That's correct.
 14 Q. And going through paragraph 35 on page
 15 22?
 16 A. Paragraph 36.
 17 Q. Paragraph 36. Okay. You're including
 18 both patents. Okay.
 19 So the terms in the claims -- well, let
 20 me -- let me start with this. Is there a -- is
 21 this -- strike that.
 22 The heading of this section says "The
 23 claims for the '304 patent" -- I'm reading on
 24 page 14 -- "suggest that the inventors were only
 25 in possession of a line where all displayed

1 JOHN PHILLIP MELLOR, Ph.D.
 2 prices are static."
 3 Is that right?
 4 A. That's correct.
 5 Q. And which -- which words in the claims
 6 are you relying on for that conclusion?
 7 MR. VOLLER: Form.
 8 THE WITNESS: Again, the -- the analysis is
 9 fairly lengthy and -- and covers more than eight
 10 pages in my report.
 11 I took a -- I started with the claim
 12 term "common static price axis," which is
 13 highlighted in the claim as recited on page nine
 14 of my report.
 15 BY MR. SAMPSON:
 16 Q. Okay. Yep, I saw that. I think we
 17 established this already with respect to the
 18 whole patent. But the claims themselves don't
 19 say all the price levels are static, right?
 20 MR. VOLLER: Form.
 21 THE WITNESS: Again, as -- as I said, it
 22 doesn't --
 23 BY MR. SAMPSON:
 24 Q. It doesn't use those words?
 25 A. It does not use those words, no.

1 JOHN PHILLIP MELLOR, Ph.D.
 2 BY MR. SAMPSON:
 3 Q. And why is that? I'm trying to
 4 understand why that doesn't relate to your
 5 analysis.
 6 A. Because saying that you -- all the
 7 prices must be static would -- that's a little
 8 bit of a hypothetical because that's not what's
 9 in there.
 10 So this is -- this is a little strange
 11 to me.
 12 Q. Right.
 13 A. But I could imagine making some
 14 explicit statements like that constituting
 15 written description support for something. But
 16 the fact that that statement is absent does --
 17 is silent.
 18 It doesn't speak, you know, one
 19 direction or another on whether there's written
 20 description support for a price column where all
 21 the prices must be static or whether there's
 22 written description support for a price column
 23 where only some of the prices.
 24 Q. Are there -- are there any -- you know,
 25 those words aren't in the claim. But are there

1 JOHN PHILLIP MELLOR, Ph.D.
 2 Q. Okay. And so can you summarize for me
 3 how, in the absence of those words, you have
 4 nonetheless concluded that the claim suggests
 5 all the displayed prices are static?
 6 MR. VOLLER: Form.
 7 THE WITNESS: I'm a little confused by your
 8 question. You seem to be implying that because
 9 the claims don't specifically say all the prices
 10 must be static that there must be written
 11 description, or I'm confused, because I don't
 12 see the connection between --
 13 BY MR. SAMPSON:
 14 Q. I think we agree --
 15 A. -- those words and written description
 16 support.
 17 Q. Okay. So you and I agree that the
 18 claims do not say that all the price levels must
 19 be static, right?
 20 MR. VOLLER: Form.
 21 THE WITNESS: I agree with that. I'm -- what
 22 I'm confused about is that doesn't seem to -- to
 23 have a whole lot to do with the written
 24 description analysis.
 25

1 JOHN PHILLIP MELLOR, Ph.D.
 2 other words in the claim that you are relying on
 3 in support of your opinion?
 4 MR. VOLLER: Form.
 5 THE WITNESS: There are a number of words,
 6 and they are documented in my declaration.
 7 BY MR. SAMPSON:
 8 Q. So do you want to just go through the
 9 way that you've set them out in the declaration?
 10 Is axis -- are you relying on the word "axis"?
 11 A. I am.
 12 Q. Okay.
 13 A. So the -- the words that come directly
 14 from the patent say a common static price axis.
 15 Q. Okay. And how -- how does the word
 16 "axis" lead you to the conclusion that all of
 17 the displayed prices are static?
 18 MR. VOLLER: Form.
 19 THE WITNESS: So we already discussed that
 20 the words in the patent are generally given
 21 their plain and ordinary meaning to one of
 22 ordinary skill in the art.
 23 And so the word "axis," as understood
 24 by one of ordinary skill in the art at the time
 25 of the invention, would support that notion that

1 JOHN PHILLIP MELLOR, Ph.D.
 2 the display must include all of the prices.
 3 BY MR. SAMPSON:
 4 Q. Okay. Are you aware of any -- you
 5 reviewed the court's claim construction rulings
 6 in this case, correct?
 7 MR. VOLLER: Form.
 8 THE WITNESS: I -- I reviewed some claim
 9 construction orders. And they are, let's see,
 10 attached as -- Exhibits 9, 10, 11, and 12 have
 11 information about claim construction in them.
 12 BY MR. SAMPSON:
 13 Q. Okay. And exhibits -- with respect to
 14 this term "axis", you're -- you're not -- you
 15 haven't cited any of those opinions, have you?
 16 MR. VOLLER: Form.
 17 THE WITNESS: I considered those opinions
 18 and -- and that's developed further, and
 19 that's -- that's another factor in -- in my
 20 analysis.
 21 BY MR. SAMPSON:
 22 Q. Okay. So -- but a separate factor from
 23 the analysis set forth beginning on page 14?
 24 MR. VOLLER: Form.
 25 THE WITNESS: Separate, additional. I mean,

1 JOHN PHILLIP MELLOR, Ph.D.
 2 is there anything in the patents that says that
 3 this range of price levels in figure three
 4 cannot be used with an additional nonstatic
 5 price scale?
 6 MR. VOLLER: Form.
 7 THE WITNESS: I'm -- I'm having sort of
 8 trouble understanding exactly what you're asking
 9 me.
 10 So looking at figure three, the
 11 column -- the whole column is identified as
 12 Item 1005.
 13 BY MR. SAMPSON:
 14 Q. Right.
 15 A. I think that figure clearly indicates
 16 that that entire price column needs to be
 17 static.
 18 Q. Okay. Have you -- have you looked at
 19 figure two in the patent? Do you understand how
 20 figure two works?
 21 A. I have looked at figure two.
 22 Q. Do you believe that figure two includes
 23 static price levels?
 24 MR. VOLLER: Form.
 25 THE WITNESS: I don't believe that figure two

1 JOHN PHILLIP MELLOR, Ph.D.
 2 they build on each other. So I'm...
 3 BY MR. SAMPSON:
 4 Q. Okay. Do you -- you agree that the
 5 patent shows a price column with static price,
 6 right?
 7 MR. VOLLER: Form.
 8 THE WITNESS: When we looked at figures I
 9 believe it was three and four, that shows a
 10 price column where all of the prices remain
 11 static between those two points.
 12 BY MR. SAMPSON:
 13 Q. Okay. And do you contend that the
 14 patent -- anywhere in the written part of the
 15 patent or the drawings or the claims, do you
 16 contend that the patent expressly says anywhere
 17 that the disclosed range of price levels cannot
 18 be used in conjunction with additional nonstatic
 19 price levels?
 20 MR. VOLLER: Form.
 21 THE WITNESS: Can you make that a little more
 22 specific?
 23 BY MR. SAMPSON:
 24 Q. Do you -- okay. So is there anything
 25 in the patent, the patents, the '132 and '304,

1 JOHN PHILLIP MELLOR, Ph.D.
 2 depicts static price columns.
 3 BY MR. SAMPSON:
 4 Q. I agree with you with figure two.
 5 Is there anything in the patent that
 6 says you cannot use figures two and three
 7 together?
 8 MR. VOLLER: Form.
 9 THE WITNESS: I think it's strongly implied
 10 that the patent teaches away from that.
 11 BY MR. SAMPSON:
 12 Q. And where?
 13 A. Column seven.
 14 Q. Which patent are you in, by the way,
 15 just so we can follow along?
 16 MR. VOLLER: Form and scope.
 17 THE WITNESS: The one -- I'm looking at
 18 patent -- the '304 patent, the one that we've
 19 been referring to.
 20 BY MR. SAMPSON:
 21 Q. Okay. Okay. Column seven?
 22 A. Starting at maybe line 27 and
 23 continuing.
 24 Q. How far? Continuing how far?
 25 A. The most on point is through the end of

1 JOHN PHILLIP MELLOR, Ph.D.
2 paragraph. So line 37 and then the next
3 paragraph I think makes clear the distinction
4 between -- that figure two is something
5 different than the invention that's described
6 here in this patent.
7 Q. Where does it say anywhere in here or
8 elsewhere in the patent that they can't be used
9 together?
10 MR. VOLLER: Form.
11 BY MR. SAMPSON:
12 Q. I understand that it's different.
13 MR. VOLLER: Form.
14 THE WITNESS: It doesn't, nor is there
15 written description support for doing that.
16 BY MR. SAMPSON:
17 Q. And when you say there's no written
18 description support for doing that, you mean
19 there's no example? Is that what you're
20 referring to?
21 A. I didn't find anything in writing that
22 suggested you should do that.
23 Q. Okay. And -- and as part of your
24 analysis, did you look for that? Did you look
25 for that suggestion?

1 JOHN PHILLIP MELLOR, Ph.D.
2 together?
3 MR. VOLLER: Form and scope.
4 THE WITNESS: Again, I think that's certainly
5 strongly implied. It may not use English words
6 quite that way. But, yes, I think the patent
7 does say that.
8 BY MR. SAMPSON:
9 Q. And you identified column seven,
10 lines 27 through 55 or so, 54 or so. Is there
11 anything else that you can point to?
12 A. Well, as I -- as I mentioned, there --
13 there the inventors described figure three and
14 four and five, and they took, I would imagine,
15 great care in describing them. And they
16 described the price column as the entire price
17 column.
18 And when they described other things
19 that were only a portion of a column, they used
20 very different notations.
21 So they used a horizontal curly brace
22 to identify the entire column, and they used a
23 vertical curly brace to identify just specific
24 portions of a column. And they chose to
25 identify the price column as the entire column.

1 JOHN PHILLIP MELLOR, Ph.D.
2 MR. VOLLER: Form.
3 THE WITNESS: I believe so. But I considered
4 a lot of things.
5 BY MR. SAMPSON:
6 Q. Okay. Other than column seven,
7 lines 25 through, what, maybe 54, is there
8 anything else in the '304 patent that suggests
9 to you that you could not use a nonstatic price
10 scale with the -- the static price levels of the
11 figure three?
12 MR. VOLLER: Form.
13 THE WITNESS: Again, the -- the form of the
14 question is -- is a little confusing to me.
15 BY MR. SAMPSON:
16 Q. So -- okay. I'll rephrase it. No
17 sense in wasting time about it.
18 I'm -- I'm referring to figure two as a
19 nonstatic price display. Okay? And then
20 figures three and four has static price levels.
21 And I asked you is there anything in
22 the patents that says you cannot use those --
23 cannot use nonstatic price levels in conjunction
24 with static price levels. Is there anything in
25 the patent that tells you you cannot use them

1 JOHN PHILLIP MELLOR, Ph.D.
2 I think that strongly indicates that it
3 was the entire column and the entire column was
4 static.
5 Q. And I understand your argument on that
6 or your position, your opinion on that.
7 My question is, is there anything in
8 the patent that says you cannot add nonstatic
9 zones to a display that has this static
10 functionality?
11 MR. VOLLER: Form.
12 THE WITNESS: Again, I think I -- I think
13 I've answered that, that the words, you cannot
14 have a nonstatic zone, I didn't find that in the
15 patent.
16 But I'm having trouble understanding
17 why we're focusing on -- on those words because
18 that doesn't seem to be written -- you know, a
19 required written element of -- of the written
20 description analysis. Because those words
21 aren't there doesn't imply that there's written
22 description for anything one way or another.
23 BY MR. SAMPSON:
24 Q. If the law -- I'm going to give you a
25 hypothetical. Okay?

1 JOHN PHILLIP MELLOR, Ph.D.
2 If the law requires a patent to
3 expressly state that this invention cannot be
4 used with another feature in order for that to
5 be precluded under the written description
6 analysis, if that was the law, would that change
7 your opinion?
8 MR. VOLLER: Form. Incomplete hypothetical.
9 Scope.
10 THE WITNESS: I'm not sure. Again, I'm not
11 exactly sure. I'm not a lawyer. So I don't --
12 I don't know all the ins and outs of the law.
13 But that's certainly very different from what I
14 think I understand the law to be. And I haven't
15 thought about that case.
16 BY MR. SAMPSON:
17 Q. Okay. Okay. That's fine. That's fair
18 enough.
19 If you could turn to Exhibit 3, which I
20 think -- I'm sorry. Not Exhibit 3,
21 Exhibit 2362, which is your declaration. And
22 then -- and I have a couple of questions for
23 you.
24 I'm looking at the section that spans
25 paragraphs 59 to 70. These paragraphs relate to

1 JOHN PHILLIP MELLOR, Ph.D.
2 Q. Yes. Yes.
3 A. So I noted that there was prior art
4 cited. But my understanding of the written
5 description is that it focuses on what's in the
6 patent. And that's what I focused on.
7 Q. So sitting here today, you are not
8 relying on the details of what is shown is any
9 specific piece of prior art listed on the face
10 of the patent for purposes of limiting the scope
11 of the invention; is that correct?
12 MR. VOLLER: Form. Scope.
13 THE WITNESS: I'm kind of confused. You used
14 words like limiting the scope of the invention.
15 BY MR. SAMPSON:
16 Q. Right.
17 A. And -- and all I did was a written
18 description analysis to find out whether there
19 was written description support for a price
20 column where all prices were static or whether
21 there was written description support for a
22 price column where only some of the prices were
23 static.
24 Q. In -- in performing that analysis, did
25 you go into the prior art and try to put it into

1 JOHN PHILLIP MELLOR, Ph.D.
2 your analysis of the prosecution histories,
3 right?
4 A. You said page -- or paragraph 59
5 through which one?
6 Q. 70.
7 A. That's correct. Those paragraphs
8 discuss my review of the prosecution histories.
9 Q. And in connection with your review of
10 the prosecution histories, did you -- did you
11 review the prior art that's cited of record?
12 MR. VOLLER: Form.
13 BY MR. SAMPSON:
14 Q. I'm sorry. Let me strike that.
15 In connection with your review of the
16 prosecution histories, did you delve into the
17 references that were cited by the patent office
18 examiner?
19 MR. VOLLER: Form.
20 BY MR. SAMPSON:
21 Q. Do you know what I'm referring to?
22 A. I believe I do. Are you referring to
23 the prior art that's cited at -- at the
24 beginning of the patent and then in the -- the
25 reexam certificate?

1 JOHN PHILLIP MELLOR, Ph.D.
2 buckets, like here's an all prices static
3 category, here's some, but not all, prices are
4 static category? Did you do that kind of thing
5 with references identified on the patent?
6 MR. VOLLER: Form.
7 THE WITNESS: I'm not sure what that would
8 look like.
9 BY MR. SAMPSON:
10 Q. Okay. I'm just asking if you did it.
11 A. I'm not -- I guess I'm not sure I
12 understand what you're asking me if I did that.
13 Q. Okay. I -- I want to make sure you
14 understand what I'm asking you, because I need
15 to know whether you did this or not.
16 So did you go through the references
17 identified on the faces of the patent and look
18 to see what kind of price level displays each of
19 those references had?
20 A. I did not.
21 Q. Okay. If you turn back to -- you
22 referenced earlier in your declaration a
23 paragraph where you had set forth the
24 independent claims of the patents. Let me see
25 if I can get you to a specific paragraph number.

1 JOHN PHILLIP MELLOR, Ph.D.
 2 It looks like we're starting on
 3 paragraph 17. And I guess, just for
 4 completeness, go through -- paragraph 17 through
 5 20 deal with the independent claims of the
 6 patents. Is that right?
 7 MR. VOLLER: Form.
 8 THE WITNESS: They do.
 9 BY MR. SAMPSON:
 10 Q. Did you -- did you conduct a written
 11 description analysis of any of the dependent
 12 claims? Because there are none mentioned in
 13 your declaration.
 14 MR. VOLLER: Form.
 15 THE WITNESS: I focused on the term "common
 16 static price axis" in the representative
 17 independent claim and -- for the '304 and then
 18 the equivalent term in the '132 patent.
 19 BY MR. SAMPSON:
 20 Q. Okay. So -- but did you specifically
 21 pick up and review any of the dependent claims
 22 and try to assess whether there was written
 23 description support for the dependent claims?
 24 MR. VOLLER: Form.
 25 THE WITNESS: So I didn't try to analyze the

1 JOHN PHILLIP MELLOR, Ph.D.
 2 little confused by what you mean that you
 3 didn't --
 4 Q. That's my question. Did you do a
 5 written description analysis of the dependent
 6 claims?
 7 MR. VOLLER: Form.
 8 BY MR. SAMPSON:
 9 Q. That's all.
 10 MR. VOLLER: Form.
 11 BY MR. SAMPSON:
 12 Q. And I'm looking through this to see if
 13 I can find the one that you mentioned. Do you
 14 recall doing that?
 15 MR. VOLLER: Form.
 16 THE WITNESS: I do recall doing that, looking
 17 at that claim, and -- and as -- as -- my
 18 recollection was that that dependent claim was
 19 not one of the original claims.
 20 BY MR. SAMPSON:
 21 Q. Did you --
 22 A. But I'm not finding it.
 23 Q. Did you independently -- independent is
 24 the wrong word.
 25 Did you separately analyze the written

1 JOHN PHILLIP MELLOR, Ph.D.
 2 dependent claims, but I did -- I did read
 3 through them.
 4 BY MR. SAMPSON:
 5 Q. Okay.
 6 A. And -- and I did look at those, and
 7 I -- I think I pointed out one example in -- in
 8 my report here.
 9 Q. Just -- just to maybe close this off, I
 10 don't know if this will end the inquiry or not,
 11 but there's no analysis in your report of any of
 12 the dependent claims, is there?
 13 MR. VOLLER: Form.
 14 THE WITNESS: Again, I -- I think I -- I just
 15 mentioned that I -- I looked at one of the --
 16 one of the claims, and maybe it's not in this.
 17 Maybe it's in my original report.
 18 BY MR. SAMPSON:
 19 Q. No. I think -- I think there is one in
 20 here. I don't think you did a written
 21 description analysis of that claim. But I think
 22 it's in here.
 23 A. Well, I looked at that claim I guess
 24 certainly as I was doing my written description
 25 analysis. But I wasn't -- I guess I'm -- I'm a

1 JOHN PHILLIP MELLOR, Ph.D.
 2 description requirement with respect to each of
 3 the dependent claims? Maybe that will get us to
 4 an end here.
 5 MR. VOLLER: Form.
 6 BY MR. SAMPSON:
 7 Q. Here you go. Paragraph 53 seems to
 8 have the claim that I think you're referring to.
 9 Then we'll get back to my question.
 10 A. That's exactly right. So paragraph 53
 11 is what I was thinking of.
 12 Q. Okay. And so what -- what I'm curious
 13 about, you mentioned all the dependent claims in
 14 paragraph 17 through 20. And so my question is
 15 did you do a separate written description
 16 analysis of the dependent claims?
 17 MR. VOLLER: Form.
 18 THE WITNESS: Again, for many of these, I'm
 19 not exactly sure what that would look like or
 20 what that would mean because --
 21 BY MR. SAMPSON:
 22 Q. I'm just asking if you did it.
 23 MR. VOLLER: Form.
 24 THE WITNESS: Well, again, I'm not -- I'm not
 25 understanding. Because the words that I looked

1 JOHN PHILLIP MELLOR, Ph.D.
 2 at were common static price axis. And, for
 3 example, dependent claim two doesn't have the
 4 words common static price axis in it. So I
 5 don't know what I would do with that.
 6 BY MR. SAMPSON:
 7 Q. Well, so that's -- that's part of my
 8 question.
 9 You -- you don't have anything in this
 10 declaration that says claim two is invalid as
 11 lacking written description, do you?
 12 MR. VOLLER: Form.
 13 THE WITNESS: I don't have anything in this
 14 declaration that says anything is invalid.
 15 All I looked at was whether there was
 16 written description support for the common
 17 static price axis in the '304 where -- you know,
 18 so -- so a price column where all of the prices
 19 are static or where only some of the prices are
 20 static.
 21 BY MR. SAMPSON:
 22 Q. Okay.
 23 A. So that's the only question I looked
 24 at.
 25 Q. Okay. That makes sense.

1 JOHN PHILLIP MELLOR, Ph.D.
 2 Q. Okay.
 3 A. So I -- so I used claim one.
 4 Q. Okay. So -- so by representative, you
 5 meant that they're merely identical or in all
 6 the significant ways? I'm trying to get your --
 7 why did you say that it's representative?
 8 MR. VOLLER: Form.
 9 THE WITNESS: Yes. Other than the difference
 10 of the method versus the computer readable
 11 medium, I think, except for that difference, the
 12 words are identical.
 13 BY MR. SAMPSON:
 14 Q. Okay. And you noticed -- so claim one
 15 of the '304 patent is reproduced here. Claim
 16 one of the '132 is on two pages later, page 11.
 17 Do you see that?
 18 A. I do.
 19 Q. Okay. And -- and, again, you said that
 20 claim one of the '132 patent was representative
 21 of your analysis. Is that for the same reasons?
 22 Or not representative of your analysis. Strike
 23 that.
 24 You said that claim one of the '132
 25 patent is representative of the claims in the

1 JOHN PHILLIP MELLOR, Ph.D.
 2 Turning back to paragraph 17 where you
 3 had -- we'll use this claim as representative.
 4 I think you called this a representative claim.
 5 What did you mean by representative?
 6 A. Paragraph 17?
 7 Q. Paragraph 17, claim one of the '304
 8 patent.
 9 A. Make sure I'm looking at the same thing
 10 you are.
 11 Q. Sure.
 12 A. Correct.
 13 Q. Okay. And -- and do you recall
 14 referring to this as a representative claim?
 15 A. I do.
 16 Q. And what did you mean by that?
 17 A. So what I meant by that was that there
 18 are two independent claims in the '304 patent
 19 that -- claims one and claims 27, that the --
 20 and that the -- that they -- let's see.
 21 Other than one being a method claim and
 22 the other being a -- I believe it was -- I want
 23 to make sure I get this right -- yeah, computer
 24 readable medium claim, they are otherwise merely
 25 identical.

1 JOHN PHILLIP MELLOR, Ph.D.
 2 '132 patent, right?
 3 MR. VOLLER: Form.
 4 BY MR. SAMPSON:
 5 Q. The independent claims in the '132
 6 patent.
 7 A. I think that's a fair characterization.
 8 Q. Okay.
 9 A. The '132 patent has three independent
 10 claims, and they're method, computer-readable
 11 medium, and a system claim.
 12 And, again, besides the difference in
 13 the identification, they're -- they're almost
 14 the same. So I used that as -- as the
 15 representative.
 16 Q. Okay. In -- in the primer that you
 17 received from CQG's attorneys about the legal
 18 aspects of the written description requirement,
 19 did you gain an understanding of what this term
 20 "comprising" means? Do you see "comprising" in
 21 the claim one of each of these examples?
 22 MR. VOLLER: Form. Scope.
 23 THE WITNESS: I'm not sure. I --
 24 "comprising" I don't believe was a word that we
 25 focused on.

1 JOHN PHILLIP MELLOR, Ph.D.
 2 BY MR. SAMPSON:
 3 Q. Are you aware that comprising is used
 4 in all of the independent claims of both patents
 5 in that same context?
 6 MR. VOLLER: Form.
 7 BY MR. SAMPSON:
 8 Q. Well, you could look if you want. They
 9 are attached.
 10 A. Given -- given that my analysis -- I'm
 11 sorry. Go ahead.
 12 Q. No. I'm saying the patents are
 13 Exhibit 2 and 3, if you want to look.
 14 A. Given that when I compared them, the --
 15 the only significant differences that I noted
 16 were whether it was method, computer readable,
 17 or system claim, I would believe that they all
 18 say --
 19 Q. They all say comprising.
 20 Are you aware of the special meaning
 21 that the word "comprising" has in patent claims?
 22 MR. VOLLER: Form. Scope.
 23 THE WITNESS: Again, that starts to sound
 24 like an infringement analysis or maybe even a
 25 claim construction-type analysis, and -- and I'm

1 JOHN PHILLIP MELLOR, Ph.D.
 2 only the claimed elements or methods having only
 3 steps that are recited in the claim but also
 4 covers products with extra features and methods
 5 that add additional steps?
 6 MR. VOLLER: Form. Scope.
 7 BY MR. SAMPSON:
 8 Q. I'm just asking were you aware of that.
 9 MR. VOLLER: Form. Scope.
 10 THE WITNESS: Again, that -- that sounds
 11 like, you know, either a claim construction or
 12 an infringement analysis. And it's my
 13 understanding that I'm answering questions about
 14 written description, which seems to be a
 15 different thing.
 16 BY MR. SAMPSON:
 17 Q. It's -- it's not really a different
 18 thing. But if it's not part of your analysis,
 19 then we won't have to talk about it. But if it
 20 was part of your analysis, then we need to get
 21 into it.
 22 MR. VOLLER: Form. Scope.
 23 BY MR. SAMPSON:
 24 Q. Were you aware -- were you aware that a
 25 claim that uses the word "comprising" is not

1 JOHN PHILLIP MELLOR, Ph.D.
 2 not a patent attorney. I was simply asked to
 3 look at whether there was written description
 4 support for a price column where all of the
 5 prices are static or whether there was written
 6 description support for a price column where
 7 only some of the prices are static.
 8 BY MR. SAMPSON:
 9 Q. Sorry. You know what? I'll do this
 10 after the break because I grabbed the wrong
 11 copy. Sorry. You know, let me pull it out.
 12 Let's go off the record for a minute.
 13 THE VIDEOGRAPHER: It is 1:39 p.m. We will
 14 go off the record.
 15 (Whereupon, a recess was had at
 16 1:39 p.m., after which the
 17 deposition was resumed at
 18 1:40 p.m. as follows:)
 19 THE VIDEOGRAPHER: It is 1:40 p.m. We are
 20 back on the record.
 21 BY MR. SAMPSON:
 22 Q. In the course of conducting your
 23 written description analysis, were you aware of
 24 the fact that a claim that uses the word
 25 "comprising" is not limited to products having

1 JOHN PHILLIP MELLOR, Ph.D.
 2 limited to products having only the claimed
 3 elements or methods having only the steps
 4 recited but also covers products with extra
 5 features and methods that added additional
 6 steps? Just were you aware of that?
 7 MR. VOLLER: Form. Scope.
 8 THE WITNESS: Again, I'm unclear how that
 9 relates to my analysis of -- of the price
 10 column. Perhaps you can put it in sharper
 11 focus.
 12 BY MR. SAMPSON:
 13 Q. Is it -- is it your understanding that
 14 the claims have to have the same meaning for
 15 purposes of infringement and validity?
 16 MR. VOLLER: Form. Scope.
 17 BY MR. SAMPSON:
 18 Q. Do you have that understanding?
 19 MR. VOLLER: Form. Scope.
 20 THE WITNESS: Again, that -- that I -- I'm
 21 not prepared to offer any opinions today
 22 regarding infringement so -- so I'm not sure
 23 about that.
 24 BY MR. SAMPSON:
 25 Q. Yeah. And I'm not asking for any of

1 JOHN PHILLIP MELLOR, Ph.D.
2 your opinions on infringement. I just want to
3 know if you were aware when you're looking at
4 the meaning of the claim and you're trying to
5 decide whether it's valid or whether it's
6 infringed that you use the same meaning. Were
7 you aware of that --
8 MR. VOLLER: Form. Scope.
9 BY MR. SAMPSON:
10 Q. -- when you wrote your opinion?
11 MR. VOLLER: Form. Scope.
12 THE WITNESS: Again, I didn't make an opinion
13 about whether it was invalid or whether it -- it
14 infringed or not.
15 All I did was look to -- at whether
16 there was written description support for a
17 price column where all the prices are static or
18 whether there was written description support
19 for a price column where only some of the prices
20 were static.
21 BY MR. SAMPSON:
22 Q. And I know we talked a lot about the
23 first of the two examples. In terms of your
24 analysis for deciding whether there was written
25 description support for a price column where

1 JOHN PHILLIP MELLOR, Ph.D.
2 aware that TT filed a motion to strike your
3 expert report?
4 MR. VOLLER: Form.
5 MR. SAMPSON: Excuse me?
6 MR. VOLLER: Form. I'm sorry.
7 THE WITNESS: I believe I saw that.
8 BY MR. SAMPSON:
9 Q. Okay. And -- and what context did you
10 see it in?
11 MR. VOLLER: Form.
12 THE WITNESS: I -- I believe I saw the motion
13 at one point.
14 BY MR. SAMPSON:
15 Q. When?
16 A. I don't remember when. It's been --
17 been a while.
18 Q. Did you have a conversation with any of
19 CQG attorneys about it?
20 MR. VOLLER: Form.
21 THE WITNESS: I imagine I did.
22 BY MR. SAMPSON:
23 Q. Do you recall having any conversation
24 with CQG attorneys about it?
25 MR. VOLLER: Form.

1 JOHN PHILLIP MELLOR, Ph.D.
2 only some of the prices are static or only some
3 of the price levels are static, how did you do
4 that?
5 A. So I think they are two sides of the
6 same coin. So if there's evidence that all of
7 the prices in the column need to be static, that
8 relates directly to whether there's any evidence
9 for a price column where only some of the prices
10 are static. So I think there's some of both in
11 here.
12 MR. SAMPSON: Okay. Why don't we take -- go
13 off the record.
14 THE VIDEOGRAPHER: It is end of Tape No. 3 of
15 the testimony of Dr. Mellor. It is 1:44 p.m.
16 We go off the record.
17 (Whereupon, a recess was had at
18 1:44 p.m., after which the
19 deposition was resumed at
20 2:42 p.m. as follows:)
21 THE VIDEOGRAPHER: It is the beginning of
22 Tape No. 4 of the testimony of Dr. Mellor. It
23 is 2:42 p.m. We are back on the record.
24 BY MR. SAMPSON:
25 Q. Good afternoon, Dr. Mellor. Are you

1 JOHN PHILLIP MELLOR, Ph.D.
2 THE WITNESS: I don't remember the specific
3 instance. But I think, you know, that would
4 have been -- I think that's likely that that
5 happened, yeah.
6 BY MR. SAMPSON:
7 Q. What was -- what was your reaction to
8 the motion to strike?
9 MR. VOLLER: Form.
10 THE WITNESS: I'm not sure that I had a
11 particular reaction. Some -- you know, a lot of
12 the things in there seemed to be legal arguments
13 that -- that I'm not particularly versed in. So
14 I'm not sure I understood many of the things in
15 there.
16 BY MR. SAMPSON:
17 Q. Yeah. That's correct. I mean, that's
18 a legal -- a lot of it's a legal argument.
19 So the question is did you have a
20 conversation with CQG's attorneys about the
21 written description law requirements after
22 seeing that motion to strike?
23 MR. VOLLER: Form.
24 THE WITNESS: I -- I'm not sure. I don't --
25 I don't remember specifically one way or the

1 JOHN PHILLIP MELLOR, Ph.D.
 2 other.
 3 BY MR. SAMPSON:
 4 Q. Do you recall whether you took any
 5 steps on your own to look into the legal
 6 requirements of written description after seeing
 7 TT's motion to strike?
 8 A. I don't believe I did.
 9 Q. Okay. Did you -- did you review any of
 10 the motion to strike in your meetings with CQG
 11 attorneys this week?
 12 A. I don't believe we did, no.
 13 Q. Okay. I'd like to direct your
 14 attention back to your expert report, which was
 15 PDX 2365. I am going to ask you to turn to page
 16 19, and I'm going to direct your attention to
 17 paragraph 41.
 18 Do you see paragraph 41?
 19 A. I do.
 20 Q. Could you take just a minute and read
 21 paragraph 41 for me, please? Did you read that?
 22 A. I did.
 23 Q. Okay. Did you -- in -- in conducting
 24 your written description analysis that you were
 25 asked to undertake as set forth in your expert

1 JOHN PHILLIP MELLOR, Ph.D.
 2 BY MR. SAMPSON:
 3 Q. Strike that.
 4 Did you use the definition that's set
 5 forth in paragraph 41 for preparing your expert
 6 report?
 7 MR. VOLLER: Form.
 8 THE WITNESS: I don't believe I did.
 9 BY MR. SAMPSON:
 10 Q. Okay. And why not?
 11 A. Well, I -- I think as explained in the
 12 remainder of -- of the paragraphs, 42 through
 13 46, it explains why.
 14 Q. 42 through 46 generally set back -- set
 15 out your background and experiences; is that
 16 right?
 17 MR. VOLLER: Form.
 18 THE WITNESS: Amongst other things, yes.
 19 BY MR. SAMPSON:
 20 Q. Is there anything in 42 through 46 that
 21 says that you are therefore not going to adopt
 22 the definition you were asked to assume of a
 23 person of ordinary skill?
 24 A. I -- I think that is captured in those
 25 paragraphs, yes.

1 JOHN PHILLIP MELLOR, Ph.D.
 2 report and also the declaration in support of
 3 the motion for summary judgment, PDX 2362, did
 4 you apply the definition for the person of
 5 ordinary skill in the art as set forth in
 6 paragraph 41?
 7 MR. VOLLER: Form.
 8 THE WITNESS: So CQG's attorneys asked me to
 9 start with the definition that's listed in
 10 paragraph 41. And in the course of looking at
 11 stuff, I used something slightly different. And
 12 I think that's spelled out in the remainder of
 13 the paragraphs 42 through 46.
 14 BY MR. SAMPSON:
 15 Q. Okay. Paragraph 41 doesn't say CQG
 16 attorneys asked me to start with this
 17 definition, does it?
 18 A. It says they asked me to assume.
 19 Q. Okay. They asked you to assume the
 20 definition that's set forth in paragraph 41,
 21 correct?
 22 A. That's correct.
 23 Q. Okay. And -- but you didn't use that
 24 definition in your expert report?
 25 MR. VOLLER: Form.

1 JOHN PHILLIP MELLOR, Ph.D.
 2 Q. Okay. Where is it captured in those
 3 paragraphs?
 4 A. It's captured in part in paragraphs 44,
 5 where I say "Accordingly, I have a greater level
 6 of skill than the person of ordinary skill in
 7 the art, but I can speak about what one of
 8 ordinary skill in the art in or about 2000 would
 9 understand because of my background and
 10 experience."
 11 And in part in the next paragraph where
 12 it describes, you know, sort of the relationship
 13 of trading in electric -- electronic trading.
 14 Q. Are you referring to paragraph 45 that
 15 says you do not have experience designing and
 16 developing graphical user interfaces for
 17 electronic trading based on input from a person
 18 with knowledge of the needs of an electronic
 19 trader? Is that what you're referring to?
 20 A. I'm referring to the whole paragraph
 21 where it continues on and it says CQG attorneys
 22 offered to put me in communication with a
 23 seasoned trader if I found it necessary to form
 24 the opinions in this report.
 25 And because that -- the matter of the

1 JOHN PHILLIP MELLOR, Ph.D.
2 patents is self-explanatory and I didn't need
3 that input from -- from the -- so combined
4 together, there's -- there's no way that I could
5 consider myself a person of ordinary -- or that
6 my level of skill exceeded the person of a
7 level -- a person of ordinary skill in the art
8 at the same time, you know, not having that
9 experience, that's incompatible with 41. I was
10 very clear about that.

11 Q. I'm not sure that I'm following you.
12 The last -- the last thing you say, you were
13 very clear about the last part of 41 is -- I'm
14 sorry. The last part of 45 is incompatible with
15 41? Is that what you're saying?

16 A. No.

17 Q. Can you explain? What's incompatible?
18 You just said something was incompatible.

19 A. So I was very explicit that I had
20 not -- I do not have experience designing and/or
21 developing graphical user interfaces for
22 electronic trading --

23 Q. Right.

24 A. -- based on input from a person with
25 knowledge of the needs of an electronic trader.

1 JOHN PHILLIP MELLOR, Ph.D.
2 primarily 42 through 45 together, yes.

3 BY MR. SAMPSON:

4 Q. Okay. Let me ask. When you say that
5 you believe that -- I'm sorry. Strike that.

6 When you say that you have a greater
7 level of skill than a person of ordinary skill
8 in the art, are you referring to any particular
9 skill in the field of electronic trading or
10 electronic user -- I'm sorry -- graphical user
11 interface design for electrical trading?

12 MR. VOLLER: Form.

13 THE WITNESS: I have a -- a broad background
14 in graphical user interface design, and I'm
15 not -- I'm not sure -- I don't believe that the
16 graphical user -- user interfaces for trading
17 are all that different from other graphical user
18 interfaces that are out there.

19 BY MR. SAMPSON:

20 Q. So did you come up in this context with
21 a definition of what the relevant art is that --
22 the heading of this is person of ordinary skill
23 in the relevant art on page 19, so what -- what
24 is the relevant art, in your view?

25 MR. VOLLER: Form.

1 JOHN PHILLIP MELLOR, Ph.D.
2 But I also was very explicit that I
3 have a skill level that's greater than the
4 person of ordinary skill in the art, and I'm
5 capable of speaking about one of -- what one of
6 ordinary skill in the art in or about 2000 would
7 understand.

8 Those things together are incompatible
9 with 41, the definition that's listed there.

10 Q. Okay. Is there anything else that you
11 would point to where you identify in your expert
12 report that you are not applying the definition
13 of a person of ordinary skill that CQG asked you
14 to assume?

15 A. Well, I think paragraph 46 sums it up.
16 And I'll refer to this person that I've been
17 describing as the culmination of -- of these
18 paragraphs as the programmer of ordinary skill.

19 Q. So that the -- is paragraph -- is
20 paragraph 46 your sum up? Is that the -- is
21 that the ordinary skill person that you're
22 applying in your expert report?

23 MR. VOLLER: Form.

24 THE WITNESS: I think that's the summary, the
25 tying all the -- all the paragraphs, you know,

1 JOHN PHILLIP MELLOR, Ph.D.

2 THE WITNESS: So I think that paragraphs 42
3 through 45 make it clear that at least the piece
4 of the definition that CQG attorneys asked me to
5 start with that says including experience
6 designing and/or developing graphical user
7 interfaces for electronic trading, based on
8 input from a person with knowledge of the needs
9 of an electronic trader is -- is not an
10 appropriate component of a person of ordinary
11 skill in the relevant art.

12 BY MR. SAMPSON:

13 Q. And my question was simply, did you
14 define what the relevant art is?

15 MR. VOLLER: Form.

16 THE WITNESS: I'm not sure I understand your
17 question.

18 BY MR. SAMPSON:

19 Q. Sitting here today, can you tell us
20 what the relevant art is for the
21 patents-in-suit? What art group do they belong
22 to?

23 MR. VOLLER: Form.

24 THE WITNESS: Well, the title of the patent
25 says a "Click based trading with intuitive grid

1 JOHN PHILLIP MELLOR, Ph.D.
 2 display of market depth" for the '304 patent.
 3 And the '132 says "Click based trading with
 4 intuitive grid display of market depth."
 5 BY MR. SAMPSON:
 6 Q. So other than the titles of the patents
 7 themselves, do you have a working definition for
 8 the relevant art that you're applying in your
 9 expert report?
 10 MR. VOLLER: Form.
 11 THE WITNESS: From the definition that I
 12 started with, it includes -- you know, it says
 13 "experience designing and/or developing user
 14 interfaces." That -- that -- that clearly seems
 15 to be a key component of -- of that.
 16 BY MR. SAMPSON:
 17 Q. Okay. In this paragraph 45, the first
 18 sentence says "I have a general understanding of
 19 trading and electronic trading."
 20 Can you just give us some details on
 21 what you meant by that?
 22 A. Well, I think that information --
 23 MR. VOLLER: Form.
 24 THE WITNESS: -- the -- the details behind
 25 that are included in my declaration on PHOSITA.

1 JOHN PHILLIP MELLOR, Ph.D.
 2 electronic" or "trading in electronic"?
 3 THE WITNESS: "Trading and."
 4 BY MR. SAMPSON:
 5 Q. Okay. Is -- is there -- is there
 6 anything not included in 36 through 41 of
 7 PDX 2364 that you're referring to when you say
 8 that you have a general understanding of trading
 9 and electronic trading?
 10 A. I think these are the primary things I
 11 rely on for -- for my knowledge.
 12 Q. Okay. Can you think of anything else
 13 right now?
 14 A. Other than just, you know, general
 15 knowledge as -- as being a reasonably educated
 16 member of society.
 17 Q. Okay.
 18 A. You know, these go beyond that.
 19 Q. Okay. And then in your declaration in
 20 support of the motion for summary judgment,
 21 PDX 2362, you have an explicit definition that
 22 you're going to apply in -- in your written
 23 description analysis set forth there. I believe
 24 it's paragraph 76. Is that correct?
 25 MR. VOLLER: Form.

1 JOHN PHILLIP MELLOR, Ph.D.
 2 BY MR. SAMPSON:
 3 Q. Okay. Do you want to refer to -- would
 4 it help you to refer to that to help you recall
 5 those details? Dr. Mellor, do you need to refer
 6 to that to recall the details?
 7 A. Well, I want to make sure I get it
 8 exactly right.
 9 Q. Okay.
 10 A. I think I'm familiar with the -- you
 11 know, the general things that I went through on
 12 that. But -- but I'm trying to make sure I
 13 get -- give you correct answers and as complete
 14 as possible.
 15 Q. Okay. Let us know what -- what's the
 16 exhibit number that you picked up and you are
 17 referring to, please?
 18 A. It's Exhibit PDX 2364.
 19 Q. Okeydoke. And when you get to the
 20 paragraphs that you are referring to, let us
 21 know.
 22 A. Paragraphs 36 through 41 provide detail
 23 on -- on my knowledge of trading and electronic
 24 trading systems.
 25 THE REPORTER: Are you saying "trading and

1 JOHN PHILLIP MELLOR, Ph.D.
 2 THE WITNESS: Can you point me again to where
 3 you're looking?
 4 BY MR. SAMPSON:
 5 Q. I'm sorry. PDX 2362, paragraph 76,
 6 which is on page 47.
 7 A. And your question about page --
 8 paragraph 76?
 9 Q. Does paragraph 76 set forth the
 10 definition of the person of ordinary skill in
 11 the art that you apply in your written
 12 description analysis?
 13 Let's start with for the summary
 14 judgment motion, and then I'll ask if it's the
 15 same in the expert report.
 16 A. So I don't -- I don't think that's the
 17 clearly stated definition of the person of
 18 ordinary skill in the art. Let me find that
 19 paragraph for you.
 20 So I believe that paragraph 97 is a
 21 more appropriate description of the person of
 22 ordinary skill in the art.
 23 Q. Okay. And just to close that off then,
 24 is paragraph 97 the definition of the person of
 25 ordinary skill that you applied in arriving at

1 JOHN PHILLIP MELLOR, Ph.D.
2 the conclusion -- the opinions in your
3 declaration in support of summary judgment?
4 A. It is.
5 MR. VOLLER: Form.
6 BY MR. SAMPSON:
7 Q. And -- and is it the same definition
8 that you applied in your expert report?
9 MR. VOLLER: Form.
10 THE WITNESS: It is.
11 BY MR. SAMPSON:
12 Q. And the essential difference, as I read
13 the two definitions, is that you have eliminated
14 the requirement that CQG attorneys asked you to
15 assume of two years of experience designing and
16 developing user interfaces, including experience
17 designing and developing graphical user
18 interfaces for electronic trading based on input
19 from a person with knowledge of needs of an
20 electronic trader and replaced that with two
21 years of experience programming graphical user
22 interfaces and general knowledge of trading and
23 electronic trading. Is that fair?
24 MR. VOLLER: Form.
25 THE WITNESS: That's -- that's a difference.

1 JOHN PHILLIP MELLOR, Ph.D.
2 MR. VOLLER: Form.
3 THE WITNESS: No, that's not what I am
4 implying there.
5 BY MR. SAMPSON:
6 Q. Okay. What -- what did you mean to
7 imply by replacing "design and development" with
8 "programming"?
9 A. At least in some cases, designing and
10 developing means something different than
11 programming and is insufficient.
12 Q. Can you explain that for me? What do
13 you mean?
14 A. So in -- in some disciplines, designing
15 is a very high level thing. And that two years'
16 experience designing the user interface is -- in
17 that case is insufficient to -- to meet the
18 level of skills of one -- for one of ordinary
19 skill in the art.
20 Q. Okay. I understand what you're saying
21 now. Okay.
22 And the same with development or is
23 development different?
24 A. It's the similar kind of thing for --
25 for developing. The -- the words designing and

1 JOHN PHILLIP MELLOR, Ph.D.
2 I think there are a couple other differences
3 that are significant also.
4 BY MR. SAMPSON:
5 Q. Okay. Tell me all the ones that you
6 think are significant.
7 A. Well, I think the first thing that is
8 significant is that in the first part of the
9 definition, it says a bachelor's degree in
10 computer science, computer engineering, or
11 electrical engineering or equivalent experience,
12 and that's a little bit different.
13 Q. It looks exactly the same as paragraph
14 41 to me. I was trying to read along as you
15 were saying it. Do you have PDX 2365, paragraph
16 41 handy?
17 A. Okay. Yes, I see that. You're
18 correct. The difference I was thinking of is --
19 is in the second part, two years of experience
20 designing and developing user interfaces as
21 opposed to two years of experience programming
22 GUIs.
23 Q. Okay. So you do not believe that the
24 person of ordinary skill in the art will have
25 design or development experience?

1 JOHN PHILLIP MELLOR, Ph.D.
2 developing mean different things to different
3 disciplines.
4 Q. Okay. And then -- then the third part
5 of it, general knowledge of trading -- excuse
6 me.
7 General knowledge of trading and
8 electronic trading you believe should be the
9 requirement rather than -- rather than
10 experience designing and/or developing graphical
11 user interfaces for electronic trading based on
12 input from a person with knowledge of the needs
13 of an electronic trader, correct?
14 A. Correct.
15 Q. And why did you -- why did you not use
16 the definition that CQG attorneys asked you to
17 assume?
18 MR. VOLLER: Form.
19 THE WITNESS: I think it was simply a matter
20 of it didn't seem appropriate. And then I
21 recorded, you know, those -- those differences
22 in that section in my expert report.
23 BY MR. SAMPSON:
24 Q. Prior -- prior to preparing your expert
25 report, did you have a conversation with any of

1 JOHN PHILLIP MELLOR, Ph.D.
2 the CQG attorneys where you advised them that
3 you thought that that definition was
4 inappropriate?
5 A. I can't remember one specifically. We
6 may have had that kind of conversation. But I
7 don't remember specifically.
8 Q. Okay. I just want to ask you a series
9 of questions about experiences relating to
10 trading or electronic trading. Okay?
11 Have you taken or taught courses in
12 finance or on the financial markets?
13 MR. VOLLER: Form.
14 THE WITNESS: I have not taught courses on
15 financial markets. I believe markets and the
16 ideas behind markets and the market system were
17 part of the economics courses I took as an
18 undergraduate.
19 BY MR. SAMPSON:
20 Q. Okay. Other than the undergraduate
21 economics courses, have you had any -- have you
22 taken any other courses on finance or financial
23 markets?
24 MR. VOLLER: Form.
25 THE WITNESS: I haven't taken any formal

1 JOHN PHILLIP MELLOR, Ph.D.
2 would point to for that?
3 MR. VOLLER: Form.
4 THE WITNESS: I think paragraph 40 has some
5 information along that lines as well. And there
6 may -- there may be others in here as well.
7 BY MR. SAMPSON:
8 Q. Okay. Apart from your review of
9 Trading Technologies' patents in this case, have
10 you studied electronic trading systems?
11 MR. VOLLER: Form.
12 THE WITNESS: Again, I'm not sure exactly
13 what you mean by -- by "studied."
14 BY MR. SAMPSON:
15 Q. I'm thinking like a formal study as
16 part of your work.
17 A. So I've not conducted a formal academic
18 study of -- of electronic trading, no.
19 Q. And have you conducted informal studies
20 of electronic trading systems? It sounds like
21 you were suggesting, maybe?
22 MR. VOLLER: Form.
23 THE WITNESS: Again, I think maybe it depends
24 on what your definition of study is. I
25 certainly had conversations with -- with my

1 JOHN PHILLIP MELLOR, Ph.D.
2 courses, no.
3 BY MR. SAMPSON:
4 Q. Have you, in the course of your
5 professional experience, ever conducted any
6 formal studies of the behavior, organization, or
7 governance of the financial markets?
8 MR. VOLLER: Form.
9 THE WITNESS: What -- what do you mean by --
10 by, I guess, "studies"?
11 BY MR. SAMPSON:
12 Q. Like academic studies.
13 A. So I haven't conducted formal research
14 in that. But I've certainly discussed the topic
15 of markets and how they behave with my
16 colleagues in -- in economics at Rose-Hulman.
17 Q. Okay. So when was that? I don't think
18 that's in your report.
19 A. I believe that is in my declaration on
20 PHOSITA. If I can have that, I think I can
21 point you to that section.
22 Q. Sure. That's -- let's make sure we get
23 the right one -- PDX 2364.
24 A. So one example of that is paragraph 38.
25 Q. Okay. Okay. Anything else that you

1 JOHN PHILLIP MELLOR, Ph.D.
2 colleagues in economics about the sort of pros
3 -- pros and cons of -- of, you know, sort of the
4 market system or the way we define it and in
5 particular about electronic trading, you know,
6 are some of the things we do with electronic
7 trading, are they good or bad or -- or, you
8 know, how technology plays into that, things
9 like that.
10 BY MR. SAMPSON:
11 Q. Okay. And I know that we went through
12 your CV earlier this morning. But I have some
13 specific questions, and these are going to be
14 more limited in time.
15 Do you have any personal knowledge
16 apart from what is taught in Trading
17 Technologies' patents of the state of the art in
18 electronic trading systems in the 1998 to 2000
19 time frame?
20 MR. VOLLER: Form.
21 THE WITNESS: Yeah, I think that I have a
22 little bit of background and -- and at least
23 some information on that.
24 BY MR. SAMPSON:
25 Q. Okay. What -- what -- what personal

1 JOHN PHILLIP MELLOR, Ph.D.
2 knowledge do you have on the state of the art?
3 A. So one of my lab mates while I was at
4 MIT -- this is fairly shortly after the
5 worldwide web became very available. So this is
6 '93 through maybe '95 time frame -- became very
7 interested in -- in sort of electronic trading
8 and stock prices and quotes and things like that
9 and actually eventually went off to develop, you
10 know, sort of a web-based tool for electronic or
11 market information and left the lab to found
12 stockmaster.com.
13 And I had a number of conversations
14 with him. We were pretty close in the lab
15 before he left school.
16 Q. So do you feel that those conversations
17 that you had with him gave you an idea of the
18 state of the art in electronic trading systems
19 in the 1998 to 2000 time frame?
20 A. I think that gives sort of a signpost
21 as far as what -- what the electronic trading
22 looked like at that point and how it -- you
23 know, how it was developing.
24 Q. How -- how about beyond a signpost?
25 Are you familiar with the entire playing field

1 JOHN PHILLIP MELLOR, Ph.D.
2 many ways the same concerns that all GUI
3 developers have.
4 Q. So putting aside what you've read in
5 the patents in the course of formulating this
6 opinion, have you done any analysis of the
7 concerns of traders or people developing
8 electronic trading systems in the 1998 to 2000
9 time frame?
10 A. I haven't done a formal study of those
11 things. But as I've indicated, I think that the
12 concerns are pretty similar to other -- other
13 GUI applications.
14 Q. What concerns are you referring to?
15 A. Well, one of the concerns that's
16 recited in the patent is about the speed. Lots
17 -- lots of GUIs out there are concerned with
18 speed.
19 Q. Are you aware of any specialized
20 concerns that would apply in the field of
21 electronic trading during that 1998 to 2000 time
22 frame?
23 MR. VOLLER: Form.
24 THE WITNESS: I'm -- I'm not sure what --
25 what you're getting at.

1 JOHN PHILLIP MELLOR, Ph.D.
2 for electronic trading in the 1998 to 2000 time
3 frame?
4 MR. VOLLER: Form.
5 THE WITNESS: I think it's -- I haven't gone
6 out and done, you know, a survey of all of that.
7 You know, the GUIs haven't changed a whole lot
8 since the early '90 time frame till now. The
9 basic principles of electronic trading haven't
10 changed a whole lot either.
11 BY MR. SAMPSON:
12 Q. You mentioned studies or analysis.
13 During the course of your work in this case,
14 have you done any analysis of the concerns in
15 the 1998 to 2000 time frame of people engaged in
16 the field of designing or developing graphical
17 user interfaces for electronic trading?
18 MR. VOLLER: Form.
19 THE WITNESS: So, again, you -- you pointed
20 out that there's a discussion of that in the
21 patent.
22 BY MR. SAMPSON:
23 Q. Right.
24 A. And -- and I think that's -- that's
25 very understandable. Those in -- those are in

1 JOHN PHILLIP MELLOR, Ph.D.
2 BY MR. SAMPSON:
3 Q. Concerns that would be particular to
4 that industry.
5 MR. VOLLER: Form.
6 THE WITNESS: There are some concerns that
7 are, you know, specifically recited in the
8 patent that -- that, you know, traders have.
9 And -- and like I've indicated, I think that
10 those concerns are similar to concerns that
11 other GUI developers have.
12 BY MR. SAMPSON:
13 Q. Okay. Are you familiar with the rate
14 of development of the technology for electronic
15 trading in the 1998 to 2000 time frame?
16 MR. VOLLER: Form.
17 THE WITNESS: I'm -- I'm a little bit
18 familiar with that, yeah.
19 BY MR. SAMPSON:
20 Q. And what's your familiarity? What's
21 your understanding?
22 A. So in my declaration in PHOSITA, one of
23 the --
24 Q. Again, I'm sorry, I don't mean to
25 interrupt. I just want to make sure we have the

1 JOHN PHILLIP MELLOR, Ph.D.
 2 record clear. That's PDX 2346.
 3 A. That's correct.
 4 Q. Okay.
 5 A. There are a number of factors that I
 6 understand are used to evaluate the appropriate
 7 definition of PHOSITA. And those -- at least
 8 some of those factors are listed in paragraph
 9 11.
 10 And one of those factors is the
 11 rapidity with which innovations are made in
 12 that. So in analyzing that element for the
 13 PHOSITA definition, I took a look at that.
 14 Q. Did you -- separate from, you know,
 15 just crafting a definition for the person of
 16 ordinary skill in the art, you know, did you do
 17 anything to put yourself into the shoes of a
 18 person of ordinary skill in the art in the 1998
 19 to 2000 time frame in doing your analysis of the
 20 TT patents?
 21 MR. VOLLER: Form.
 22 THE WITNESS: Well, I think that that's
 23 exactly the kind of thing that you do in
 24 analyzing this.
 25 I have a lot of experience with GUI. I

1 JOHN PHILLIP MELLOR, Ph.D.
 2 I'm misunderstanding what you mean by did I do
 3 anything.
 4 BY MR. SAMPSON:
 5 Q. So --
 6 A. Do you mean do anything other than sort
 7 of have lived through that time period and --
 8 and had a normal professional career?
 9 Q. Well, did you review any materials?
 10 Did you review, you know, publicly available
 11 information on the trading markets, the state of
 12 electronic trading in 1998, any of that kind of
 13 stuff that would kind of bring you back up to
 14 speed with the details of what was going on at
 15 that time in the field of electronic trading?
 16 MR. VOLLER: Form.
 17 THE WITNESS: So what I did in analyzing
 18 PHOSITA I think is documented in my declaration
 19 on PHOSITA.
 20 BY MR. SAMPSON:
 21 Q. Right.
 22 A. And we talked about those six factors,
 23 and I think all of that relates a little bit
 24 to -- to some of those things.
 25 Q. Okay. So there is -- I guess just to

1 JOHN PHILLIP MELLOR, Ph.D.
 2 have -- both programming and designing and
 3 developing. And I have a good general
 4 understanding of trading and electronic trading.
 5 And at -- in the '99 to 2000 time frame, I
 6 think -- frame, I think my skill level exceeded
 7 the level of one of ordinary skill in the art.
 8 But I -- at that point in my career, I
 9 was there. I could look at that and understand
 10 what one of level -- what one of ordinary skill
 11 in the art would understand.
 12 BY MR. SAMPSON:
 13 Q. I -- I -- I don't disagree that you
 14 would have that capability. I'm asking did you
 15 do anything to put yourself in that position,
 16 to -- to -- to familiarize yourself with the
 17 position, the knowledge of a person of ordinary
 18 skill in the art in the '98 to 2000 time
 19 frame --
 20 MR. VOLLER: Form.
 21 BY MR. SAMPSON:
 22 Q. -- for purposes of conducting your
 23 analysis?
 24 MR. VOLLER: Form.
 25 THE WITNESS: Okay. I guess -- I guess maybe

1 JOHN PHILLIP MELLOR, Ph.D.
 2 close out, is there anything not identified in
 3 your declaration that you believe that you did
 4 to put yourself in a position to -- to be that
 5 person of ordinary skill in the art in the 1998
 6 to 2000 time frame?
 7 MR. VOLLER: Form.
 8 THE WITNESS: I -- I think the -- the
 9 material that's recorded in my declaration on
 10 PHOSITA captures it pretty nicely.
 11 BY MR. SAMPSON:
 12 Q. Okay. Are you aware in the 1998 to
 13 2000 time frame of design considerations for
 14 trading screens?
 15 MR. VOLLER: Form.
 16 THE WITNESS: That's not something that I
 17 looked at extensively beyond what's captured
 18 in -- in -- in the patents.
 19 BY MR. SAMPSON:
 20 Q. In TT's patents -- I'm sorry. In
 21 Trading Technologies patents?
 22 A. Correct.
 23 Q. Okay. Are you familiar with the goal
 24 of speed and accuracy relative to trading at the
 25 inside market?

1 JOHN PHILLIP MELLOR, Ph.D.
 2 MR. VOLLER: Form.
 3 THE WITNESS: I am.
 4 BY MR. SAMPSON:
 5 Q. Okay. What is your understanding about
 6 that goal?
 7 A. So I believe I put some information
 8 about that in -- in -- in my reports.
 9 Q. I'm sorry. Again, which -- which
 10 document are you referring to by exhibit number?
 11 A. Let's see. Right now I'm referring to
 12 Document 2364. And, again, this is in the
 13 section that says -- so this is on page 11
 14 starting with paragraph 26, and -- and it
 15 recites, you know, some of the -- some of the
 16 challenges, the problems encountered in the
 17 art -- prior art solutions and the rapidity with
 18 which innovations are made.
 19 So that -- that -- there's a lot of
 20 information here that's on point to that.
 21 Q. Isn't -- isn't the information that
 22 you're pointing to just information that comes
 23 from TT's patent?
 24 A. Yep. A lot of this -- there are cites
 25 into the patent for a lot of this information,

1 JOHN PHILLIP MELLOR, Ph.D.
 2 BY MR. SAMPSON:
 3 Q. Okay. Do you have -- do you have a
 4 view as to whether the figure two style screen
 5 would accomplish the goals of the person of
 6 ordinary skill in the art designing GUIs for
 7 electronic trading in the 1998 to 2000 time
 8 frame?
 9 MR. VOLLER: Form.
 10 THE WITNESS: I'm not -- can you -- I'm
 11 confused by your question.
 12 BY MR. SAMPSON:
 13 Q. So would the person of ordinary skill
 14 in the art view the figure two style screen as
 15 satisfying their design concerns for electronic
 16 trading in the 1998 to 2000 time frame?
 17 MR. VOLLER: Form.
 18 THE WITNESS: What do you mean by "satisfying
 19 their design concerns"?
 20 BY MR. SAMPSON:
 21 Q. Are you familiar with what the design
 22 concerns for the ordinary designer in the field
 23 of electronic trading screens was back in the
 24 1998 to 2000 time frame?
 25 A. Well, I have recorded some of -- you

1 JOHN PHILLIP MELLOR, Ph.D.
 2 that's correct.
 3 Q. That's what I thought. Okay.
 4 Are you aware that, you know, you
 5 referred to this -- let's take a look PDX 2364.
 6 On page 13, there's an image taken from the
 7 patent, figure two of the patent. Do you see
 8 that?
 9 A. I do see that.
 10 Q. Are you aware that screens similar to
 11 figure two were the conventional type of trading
 12 screen used in the art in the 1998 to 2000 time
 13 frame?
 14 MR. VOLLER: Form.
 15 THE WITNESS: I believe that screens like
 16 this were used in that time frame, yes.
 17 BY MR. SAMPSON:
 18 Q. Did you understand how widespread the
 19 use of that type of screen was at the time?
 20 MR. VOLLER: Form.
 21 THE WITNESS: I -- I don't think I have a --
 22 the -- the information to say whether -- what
 23 percentage of the people use this kind of screen
 24 versus something else.
 25

1 JOHN PHILLIP MELLOR, Ph.D.
 2 know, some of that information here in my
 3 report.
 4 Q. Okay. And does that allow you to say
 5 whether you have a view as to whether the figure
 6 two style screen addresses those concerns at
 7 that time?
 8 A. Well, I think as pointed out, you know,
 9 by the patent, there were some limitations to
 10 the figure two type kind of screen.
 11 Q. Do you think that those limitations
 12 were limitations that were recognized by the
 13 person of ordinary skill in the art in 1998 to
 14 2000?
 15 MR. VOLLER: Form.
 16 THE WITNESS: Yeah, I think the PHOSITA would
 17 recognize those as -- as issues.
 18 BY MR. SAMPSON:
 19 Q. Okay. And what -- what's your basis
 20 for that?
 21 A. Well, I think the descriptions that are
 22 cited in paragraph 26 lay out pretty clearly
 23 the -- the reasons there.
 24 Q. Paragraph 26, which is the cites to the
 25 patents-in-suit, right?

1 JOHN PHILLIP MELLOR, Ph.D.
 2 A. That's correct.
 3 Q. Okay. Were you -- are you familiar in
 4 the 1998 to 2000 time frame with the person of
 5 ordinary skill's goal of conserving screen real
 6 estate?
 7 MR. VOLLER: Form.
 8 THE WITNESS: I'm not sure that that's
 9 necessarily unique to that time period. There's
 10 never enough screen real estate.
 11 BY MR. SAMPSON:
 12 Q. There's no mention of screen real
 13 estate in your report or declarations, is there?
 14 MR. VOLLER: Form.
 15 THE WITNESS: I don't believe so.
 16 BY MR. SAMPSON:
 17 Q. I'm going to shift gears for a little
 18 bit. But these questions are sort of general to
 19 your expert report and each of your
 20 declarations. So if you want to take them one
 21 at a time, we can take them one at a time. But
 22 I'll see if I can save time and talk about them
 23 together.
 24 In -- in my reading of your expert
 25 report and my reading of your two declarations,

1 JOHN PHILLIP MELLOR, Ph.D.
 2 with the attorneys when they were talking about
 3 the legal standards that apply to written
 4 determinations?
 5 MR. VOLLER: Form. Scope.
 6 THE WITNESS: Again, that -- that seems to be
 7 a legal question, and I'm -- I'm not a lawyer so
 8 that, you know, my analysis focused on whether
 9 or not there was a written description for
 10 that -- that price column where either all the
 11 prices were static or that price column where
 12 only some of the prices were static.
 13 BY MR. SAMPSON:
 14 Q. Okay. So in doing your analysis, did
 15 you account in any way for the presumption of
 16 validity?
 17 MR. VOLLER: Form. Scope.
 18 THE WITNESS: My analysis just purely looked
 19 at whether there was a written description. So
 20 in validity, you know, the legal consequences of
 21 whether there was written description or not is
 22 -- is not something that I considered or nor was
 23 it something I was asked to consider.
 24 BY MR. SAMPSON:
 25 Q. Another -- another thing that I did not

1 JOHN PHILLIP MELLOR, Ph.D.
 2 so the expert report is 2365 and the
 3 declarations are 2364 and -- 2362 and 2363.
 4 MR. VOLLER: What -- what is 2363?
 5 MR. SAMPSON: The volume two of the
 6 declaration.
 7 THE WITNESS: Got it. Thank you.
 8 BY MR. SAMPSON:
 9 Q. So I didn't see in your expert report
 10 or either declaration any mention of the
 11 presumption of validity. Do you know what that
 12 is?
 13 MR. VOLLER: Form. Scope.
 14 THE WITNESS: Excuse me. I'm -- I'm a little
 15 confused. I wasn't asked to opine about
 16 invalidity or -- or validity. All I was asked
 17 to -- to do was to determine whether there was
 18 written description support for a price column
 19 where all of the prices are static or whether
 20 there was written description support for a
 21 price column where only some of the prices are
 22 static.
 23 BY MR. SAMPSON:
 24 Q. Okay. So you don't recall any
 25 conversation about a presumption of validity

1 JOHN PHILLIP MELLOR, Ph.D.
 2 see in your expert report or either of your
 3 declarations was any mention of the burden of
 4 proof for proving a written description failure.
 5 Did you discuss with CQG's attorneys
 6 what the -- do you know what I mean when I say
 7 burden of proof?
 8 MR. VOLLER: Form. Scope. Relevance.
 9 THE WITNESS: Again, I'm not -- I'm not a
 10 lawyer. I have a general idea of what the
 11 burden of proof is, not for a specific case, but
 12 the notion.
 13 BY MR. SAMPSON:
 14 Q. Right.
 15 A. But, again, that seems to be a legal
 16 question about what are -- what are the
 17 consequences, you know, if there isn't written
 18 description, not, you know, the --
 19 Q. It's actually -- it's not -- well, let
 20 me say, I'm going to ask you to assume that the
 21 written description analysis, if a -- if a court
 22 is going to do a written description analysis,
 23 they have to take into consideration the burden
 24 of proof and presumption of validity, two things
 25 that are not in your report or declarations.

1 JOHN PHILLIP MELLOR, Ph.D.
2 My question is if -- if you accept that
3 they are necessary to the written description
4 analysis, do you -- do you agree with me that
5 you did not apply them?
6 MR. VOLLER: Form. Scope. Relevance.
7 THE WITNESS: I'm -- I'm not sure that I do.
8 I'm a little confused by your question.
9 BY MR. SAMPSON:
10 Q. Okay.
11 A. I mean, ultimately, it seems like
12 there's two pieces here. One is a legal
13 question about what are the consequences if
14 there isn't written description support and a
15 sort of analysis that merely looks and sees
16 whether there is written description support
17 for -- for a price column with all the prices
18 being static or whether there is written
19 description support for a price column where
20 only some of the prices are static.
21 Q. Are you -- are you saying that your
22 analysis did not intend to arrive at a legal
23 conclusion that written description is lacking
24 in the patents?
25 MR. VOLLER: Form. Scope.

1 JOHN PHILLIP MELLOR, Ph.D.
2 talking about PDX 2362, and specifically you had
3 directed me to paragraph 92 and its
4 identification of some shortcomings with respect
5 to the figure two style screen.
6 Did you find paragraph 92? It's on
7 page 52.
8 MR. VOLLER: Form.
9 THE WITNESS: I see paragraph 92. I -- I
10 think before the break we were in the PHOSITA
11 declaration, not -- not this one. But perhaps
12 I'm -- I'm mistaken.
13 BY MR. SAMPSON:
14 Q. Okay. No, that could be. Let me see
15 if I can find the same paragraph in 2364.
16 So it's -- you're right. We're looking
17 at PDX 2364. And I guess it's paragraph 26 and
18 27. Let's look -- let's look at paragraph 26.
19 There's some bullet points that talk
20 about some shortcomings of the figure two style
21 screen.
22 MR. VOLLER: Form.
23 BY MR. SAMPSON:
24 Q. Do you see that?
25 A. I -- I do see some bullet points, yes.

1 JOHN PHILLIP MELLOR, Ph.D.
2 THE WITNESS: I'm -- I'm not sure that I'm
3 equipped or -- or, you know, I'm not a lawyer.
4 So I can't -- I don't think I can make a legal
5 conclusion. I certainly wouldn't feel
6 comfortable making a legal conclusion.
7 But as -- you know, I was asked to
8 opine as an expert about whether there was
9 support for the all prices -- or a price column
10 where all prices are static or whether there was
11 support for a price column where only some of
12 the prices are static.
13 MR. SAMPSON: Okay. Let's take a short
14 break. Go off the record.
15 THE VIDEOGRAPHER: It is 3:38 p.m. We go off
16 the record.
17 (Whereupon, a recess was had at
18 3:38 p.m. after which the
19 deposition was resumed at
20 3:56 p.m. as follows:)
21 THE VIDEOGRAPHER: This is the beginning of
22 Tape No. 5 of the testimony of Dr. Mellor. It
23 is 3:56 p.m. We are back on the record.
24 BY MR. SAMPSON:
25 Q. Dr. Mellor, before the break, we were

1 JOHN PHILLIP MELLOR, Ph.D.
2 Q. Okay. And -- and I asked you about
3 those earlier. Let me circle back. We're
4 trying to figure out what a person of ordinary
5 skill in the art at the time would think, right?
6 So we're in this 1998 to 2000 time frame. And
7 I'll just rephrase the question from before.
8 Do you believe that the person of
9 ordinary skill in the art in the 1998 to 2000
10 time frame would recognize those shortcomings of
11 the figure two style screen that are identified
12 in the Trading Technologies patent?
13 A. I think I said before that the person
14 of ordinary skill in the art would -- would
15 recognize those deficiencies.
16 Q. Are you aware of any evidence in this
17 case to the contrary?
18 MR. VOLLER: Form. Scope.
19 THE WITNESS: I'm -- I'm -- I'm not sure
20 exactly what you're asking.
21 BY MR. SAMPSON:
22 Q. So assume that there is some
23 significant evidence in the case that users,
24 developers, programmers at the time liked the
25 figure two style screen, thought -- thought that

1 JOHN PHILLIP MELLOR, Ph.D.
2 it was fast and accurate. Okay?
3 What personal experience or knowledge
4 do you have that contradicts that assumption?
5 MR. VOLLER: Form.
6 THE WITNESS: I think as much is stated in
7 the patents.
8 BY MR. SAMPSON:
9 Q. Right. I'm not asking about the
10 patents or the inventor's knowledge. I want to
11 know what personal knowledge you have from
12 the -- you know, from the trading field in 1998
13 to 2000.
14 A. Again, I think the information that's
15 recited in the specification of the patent
16 matches, you know, my experience.
17 Column seven of the -- this is the --
18 let me make sure. The '304 patent, in
19 describing figure two, says "This combination
20 may be considered counterintuitive and difficult
21 to follow by some traders."
22 Q. I'm sorry. I wasn't quite with you.
23 Can you give me the line numbers in column
24 seven?
25 A. Certainly. So column seven. The

1 JOHN PHILLIP MELLOR, Ph.D.
2 A. Okay. Well, I think I have two -- a
3 couple of bases. First of all, I -- I have a
4 lot of experience with graphical user
5 interfaces. And I can put myself back into the
6 1998 to 2000 time frame with graphical user
7 interfaces, and I can understand what's being
8 described here.
9 And I can put myself in the position of
10 the PHOSITA, and I can say, yeah, at least some
11 of those folks would find this to be an issue,
12 just like the inventors captured in this
13 paragraph in the patent.
14 So what they said about it matches my
15 experience.
16 Q. Okay. Now, take a step back. So
17 you're applying your definition of the person of
18 skill in the art, right?
19 A. I am.
20 Q. In -- in answering my question just
21 now, you're applying your definition, right?
22 A. I believe so.
23 Q. Okay.
24 A. But, again, I'm -- I'm trying to answer
25 your questions --

1 JOHN PHILLIP MELLOR, Ph.D.
2 paragraph I'm pointing to is lines 27 through it
3 looks like 37.
4 Q. Right. So this is what the inventor
5 said, right? You understand that?
6 A. I do.
7 Q. Okay. So how do you know that that was
8 the thought of the average person of skill in
9 the art at the time?
10 MR. VOLLER: Form.
11 THE WITNESS: Well, I'm a little confused
12 about what the average person of skill in the
13 art is since the -- a person of average skill in
14 the art is sort of a hypothetical person to
15 start with.
16 BY MR. SAMPSON:
17 Q. Right.
18 A. And then I'm not sure what it means to
19 take an average of a hypothetical.
20 Q. Okay. Let's just take the person of
21 average skill. How would -- how do you know
22 this is in the thought process of a person of
23 ordinary skill in the art in the 1998 to 2000
24 time frame? What basis do you have for making
25 that statement?

1 JOHN PHILLIP MELLOR, Ph.D.
2 Q. Right.
3 A. -- and -- and I'm doing it a little bit
4 on the fly here. I haven't thought deeply
5 about -- about these, but I believe that to be
6 correct.
7 Q. Okay. So here's my question. When you
8 take out the requirement of trading experience
9 or knowledge of a trader from the definition of
10 the person of skill in the art, how can you say
11 that the person of ordinary skill in the art
12 would have the same -- would recognize the same
13 deficiencies?
14 MR. VOLLER: Form.
15 THE WITNESS: I think it -- I think it's --
16 it's pretty straightforward. The -- you know,
17 the basic ideas of how trading works and
18 electronic trading works is -- is not very
19 complicated, and I think it would be easily
20 recognized.
21 BY MR. SAMPSON:
22 Q. Okay.
23 A. I recently started reading a little bit
24 of a transcript, I think it was before Judge
25 Ellis, and I think he -- much was said about

1 JOHN PHILLIP MELLOR, Ph.D.
2 the -- you know, about the trading aspects of
3 this invention, that it was very straightforward
4 and -- and simple. The trading side of it was
5 very straightforward and simple; and once you
6 knew some terms, that was all you needed.
7 Q. What -- what transcript are you
8 referring to?
9 A. I -- I have only just seen it recently,
10 and I haven't finished reviewing it. But I
11 think it was a tutorial on electronic trading
12 maybe for Judge Ellis, something like that.
13 Q. And do you recall whether the
14 statements that you're referring to were made by
15 the defendant in that case or whether they were
16 made by Trading Technologies?
17 A. Actually, I think they were made by
18 Trading Technologies.
19 Q. Okay. And -- but, again, as you're
20 sitting here today, you're not aware of the
21 evidence in the case already that a person of
22 ordinary skill in the art would not have
23 recognized those deficiencies? You're not aware
24 of that -- that evidence?
25 MR. VOLLER: Form.

1 JOHN PHILLIP MELLOR, Ph.D.
2 BY MR. SAMPSON:
3 Q. Okay. Okay. Let's -- I want to do
4 some cleanup. Let's look at PDX 2362. And if
5 you could turn to paragraph 24, which is on
6 page 12. It starts on page 12, actually
7 paragraphs 23 and 24, from 12 to 13.
8 Do you see where, in paragraphs 23 and
9 24, it says "Federal circuit also interpreted
10 the claims to require a manual recentering
11 command"?
12 A. I do.
13 Q. How important is that statement to your
14 written description opinion?
15 MR. VOLLER: Form.
16 THE WITNESS: This is a -- a claim
17 construction issue.
18 BY MR. SAMPSON:
19 Q. Right.
20 A. And that -- I think that goes a lot
21 more towards infringement and the opinions that
22 are stated in my -- in this case the
23 declaration.
24 Q. Right. This is your declaration in
25 support of summary judgment?

1 JOHN PHILLIP MELLOR, Ph.D.
2 THE WITNESS: Is there something you want to
3 point me to to look at?
4 BY MR. SAMPSON:
5 Q. No. I'm trying to -- no. I'm trying
6 to determine what your level of familiarity with
7 the evidence in the case is right now.
8 MR. VOLLER: Form.
9 THE WITNESS: Okay. The materials -- I think
10 we covered this earlier. But the materials that
11 I reviewed and relied upon to come to my
12 opinions is -- is cited in my expert report and
13 the two declarations.
14 BY MR. SAMPSON:
15 Q. Okay. Okay. So this Judge Ellis
16 thing, that's not related to these opinions, the
17 transcript that you're reviewing?
18 MR. VOLLER: Form.
19 THE WITNESS: I hadn't reviewed that until
20 maybe -- oh, I don't remember -- but either
21 yesterday or the day before and -- and so had no
22 impact in coming to these decisions, but it
23 seems very consistent with my analysis and --
24 and the positions I took that -- that is clearly
25 stated in these opinions.

1 JOHN PHILLIP MELLOR, Ph.D.
2 A. Correct. Those opinions relate to
3 written description and where there is written
4 description support for a price column where all
5 the prices are static or whether there is
6 written description support for a price column
7 where only some of the prices are static.
8 Q. Did you rely on the court's claim
9 construction ruling in making your opinions on
10 written description?
11 MR. VOLLER: Form.
12 THE WITNESS: I considered the federal
13 circuit's claim construction, and -- and that's
14 discussed in this report.
15 BY MR. SAMPSON:
16 Q. Okay.
17 A. We can take a look at those sections
18 if --
19 Q. Sure. Why don't we look at the section
20 about the requirement of a manual recentering
21 command.
22 A. Do you want to point me to the section
23 you want to discuss?
24 Q. Oh, I thought you were going to direct
25 me. I'll find it for you, though.

1 JOHN PHILLIP MELLOR, Ph.D.
2 Paragraph 49. Okay. So this is one of
3 the factors that you used in your analysis; is
4 that correct?
5 A. What do you mean by "this"?
6 Q. The federal circuit -- your -- your
7 statement that the federal circuit -- let me
8 flip back and make sure I say it right.
9 "Federal circuit interpreted the claims
10 to require a manual recentering command."
11 MR. VOLLER: Form.
12 THE WITNESS: Let me make sure I understand
13 your question. You're saying am I relying on
14 that part of the -- the federal circuit's claim
15 construction, the manual centering commanding
16 required for this discussion around paragraph
17 49?
18 BY MR. SAMPSON:
19 Q. Right. In -- in paragraph 49, the last
20 sentence says "I understand that one-click
21 recentering command" -- excuse me. I'll start
22 over.
23 "I understand that the one-click
24 recentering technique is the claims manual
25 recentering command identified by the federal

1 JOHN PHILLIP MELLOR, Ph.D.
2 of the federal circuit's claim construction.
3 BY MR. SAMPSON:
4 Q. Okay.
5 A. It would still hold absent that
6 sentence -- the last sentence of paragraph 23
7 that you pointed me to.
8 Q. Okay. So if -- I'm having a hard time
9 understanding why you included it in your
10 declaration if it doesn't support or if you're
11 not relying on it for your written description
12 opinion.
13 MR. VOLLER: Form.
14 BY MR. SAMPSON:
15 Q. Can you explain that to me?
16 A. Well, I think what's written here is
17 pretty straightforward. I'm discussing one of
18 only two examples of movement in the Mercury
19 display that are -- that's described.
20 And paragraph 48 lays out that need
21 that's cited by the inventors for manual
22 recentering. Because -- because the Mercury
23 display has a static price axis, the inside
24 market might move off the screen. And it's
25 important for traders to be able to see the

1 JOHN PHILLIP MELLOR, Ph.D.
2 circuit." Is that referring back to paragraph
3 23?
4 MR. VOLLER: Form.
5 THE WITNESS: What is stated here is that the
6 language in the excerpt from the patent right
7 above it --
8 BY MR. SAMPSON:
9 Q. Uh-huh.
10 A. -- is slightly different than the
11 language used by the federal circuit. And I'm
12 pointing out that I understand that both of
13 those things to be discuss -- discussing the
14 same thing.
15 Q. Which is what?
16 A. That -- that manual recentering
17 command.
18 Q. And it -- so, again, I'm asking is it
19 relevant or important to your written
20 description opinion whether the claims require a
21 manual recentering command or not?
22 MR. VOLLER: Form.
23 THE WITNESS: I think the discussion that I
24 have included in my report in paragraphs 48, 49,
25 and 50 doesn't depend directly on that portion

1 JOHN PHILLIP MELLOR, Ph.D.
2 inside market.
3 So they described a manual recentering
4 feature to be able to bring that inside market
5 back on to the screen. And I've included the --
6 the section from -- from the patent that -- that
7 describes that.
8 And what's important about this
9 analysis is that the inventors chose to describe
10 their invention in terms of or relative to the
11 need for this manual recentering because all the
12 prices on the screen were static and the inside
13 market moved off the screen. And the only way
14 you can get it back was to use that one-click
15 recentering, that manual recentering command
16 that the federal circuit was mentioning.
17 It seemed appropriate in -- in
18 completeness to tie those two together.
19 Q. Okay.
20 A. Even the -- the language is slightly
21 different, but -- but I understood them to be
22 talking about the same thing.
23 Q. Would your opinion change if the court
24 said that the manual recentering command is not
25 required by the claims? Your opinion on written

1 JOHN PHILLIP MELLOR, Ph.D.
2 description.
3 MR. VOLLER: Form. Incomplete hypothetical.
4 THE WITNESS: Yeah. I would have to evaluate
5 whatever it is that the federal circuit said and
6 see how that impacted. But I -- I can tell you
7 that this is one piece of a -- of a large
8 analysis. And I don't know whether that change
9 would affect the overall analysis right here as
10 I -- as I sit. If you -- you know, we -- so it
11 may or may not.
12 BY MR. SAMPSON:
13 Q. Okay. And -- that's okay.
14 Let's look at the same document, 2362,
15 paragraphs 29 to 33. Is it a -- is it fair to
16 say that your analysis -- under your analysis,
17 the term "common" means universal, based on the
18 analysis in paragraphs 29 to 33?
19 A. Yes, I think that's a fair
20 characterization.
21 Q. Okay. And why -- why -- I notice -- so
22 you have in this declaration two excerpts from
23 dictionaries that include the word "common."
24 And the first definition in both dictionaries
25 is -- well, I'll read them one at a time.

1 JOHN PHILLIP MELLOR, Ph.D.
2 Q. Okay. And -- and then we move on to
3 paragraph 34, right, where there are, I guess,
4 on page 21 a couple of circuit diagrams? Is
5 that what those are? What are those on page
6 31 -- 21?
7 A. Those are actually OP amps.
8 Q. Okay.
9 A. So amplifier circuits.
10 Q. Amplifier circuits.
11 And in letter B, the letter B image,
12 you've highlighted an amplifier with a common
13 terminal (ground) between the input and output
14 ports; is that right?
15 A. That's correct.
16 Q. And in -- in that context, it would
17 make no sense for common to mean universal,
18 right?
19 MR. VOLLER: Form.
20 THE WITNESS: I think that's exactly what it
21 means.
22 BY MR. SAMPSON:
23 Q. In this example?
24 A. In Picture B, that is the universal
25 ground for that circuit.

1 JOHN PHILLIP MELLOR, Ph.D.
2 The first one, which is on page 17,
3 belonging equally to or shared; and on page 19,
4 generally shared or participated in.
5 And your analysis, you've rejected
6 those definitions; is that right?
7 MR. VOLLER: Form. Misstates the document.
8 THE WITNESS: First off, the -- the second
9 thing you read isn't from a dictionary.
10 BY MR. SAMPSON:
11 Q. I'm sorry. You're right.
12 A. It's actually from a thesaurus.
13 Q. I appreciate the correction. Thank
14 you.
15 A. And the reasoning and the analysis is
16 fully contained in paragraphs 29 through 33.
17 And -- and it -- it probably makes more sense to
18 start at the beginning of that analysis than
19 kind of jumping in the middle with the -- the
20 dictionary definition.
21 Q. Well, we can do that if you'd like. My
22 only point was that you rejected that
23 definition, right? Shared, you said, is
24 inappropriate; is that correct?
25 A. I did.

1 JOHN PHILLIP MELLOR, Ph.D.
2 Q. Okay. So are all the nodes in that
3 circuit connected to that ground?
4 A. It is the common ground. It is the
5 universal ground for both the input and the
6 output.
7 Q. Right. What -- what I'm asking you,
8 are all of the nodes in that circuit connected
9 to common ground?
10 MR. VOLLER: Form.
11 THE WITNESS: Your -- your question doesn't
12 make any sense.
13 BY MR. SAMPSON:
14 Q. I -- do you know what the -- the nodes
15 in the circuit are?
16 A. I do.
17 Q. Okay. Can you answer whether they're
18 all connected to common ground, all of the
19 nodes?
20 A. Again, your question doesn't make any
21 sense.
22 Q. Why don't you believe my question makes
23 any sense?
24 A. Well, in a -- in a circuit, you
25 couldn't have all the grounds connected or all

1 JOHN PHILLIP MELLOR, Ph.D.
2 of the nodes connected to ground. It's referred
3 to as --
4 Q. Well, you certainly could. They would
5 just be shorted.
6 A. Well, you'd have no circuit.
7 What we have is a common ground, not
8 all the nodes are grounded. So --
9 Q. Right. Not all --
10 A. I mean, your question -- I don't
11 understand your question.
12 Q. Not all of them are grounded in this
13 common terminal; is that right?
14 MR. VOLLER: Form.
15 THE WITNESS: Say that again.
16 BY MR. SAMPSON:
17 Q. Not all of the nodes are grounded to
18 the common terminal.
19 A. You're -- you're being -- I'm -- I
20 guess I'm having problems with the terms that
21 you're using. A common ground -- the common
22 terminal, that is the ground. That's -- that's
23 exactly what it says, the common terminal
24 (ground).
25 Q. Between the input and output ports?

1 JOHN PHILLIP MELLOR, Ph.D.
2 that common has to mean universal?
3 A. Again, it's -- it's one factor of -- of
4 many that I looked at.
5 Q. Okay. If the -- if the court disagrees
6 with you, does it change your opinion?
7 MR. VOLLER: Form. Incomplete hypothetical.
8 THE WITNESS: If the court disagreed with me,
9 I will have to consider that more -- more fully.
10 But, again, it's one of many factors, and I
11 think it's unlikely that it would change the
12 final outcome. But I have to think more
13 carefully about that.
14 BY MR. SAMPSON:
15 Q. Okay. And, in fact, in the claim
16 construction section, you pointed out that the
17 judge did construe "common" in a different way
18 than you're using it in your report, is that --
19 or excuse me -- in your declaration, right?
20 A. Let's see. I'm going to find that
21 section to make sure I --
22 Q. Sure.
23 A. -- you know, answer completely.
24 And -- so I did point out that --
25 Q. Are you looking at paragraph 29?

1 JOHN PHILLIP MELLOR, Ph.D.
2 A. Correct.
3 Q. Right?
4 A. So that is the universal ground.
5 Q. And there are two nodes connected to
6 that terminal, to the common ground?
7 A. Correct.
8 Q. One of the input nodes and one of the
9 output nodes?
10 A. Correct. It's -- it's the common
11 ground for both the input and the output.
12 Q. Not all of the input and output nodes,
13 right?
14 A. What I said is that it was the common
15 ground for the input --
16 Q. Right.
17 A. -- and the common ground for the
18 output.
19 Q. Okay. But not all --
20 A. So it is the universal ground.
21 Q. Right. But not all of the nodes are
22 connected?
23 A. I would agree.
24 Q. Okay. Thank you.
25 How important is it to your opinion

1 JOHN PHILLIP MELLOR, Ph.D.
2 A. I am looking at paragraph 29.
3 Q. Okay. Thank you. I just want to make
4 sure we're on the same page.
5 A. I did point out that that was a -- a
6 term that was construed. I also pointed out
7 that it appears to be an oversight.
8 Because if you substitute in the -- the
9 terms that the court indicated were synonymous,
10 so "common," "corresponding to," and "aligned,"
11 if you substituted -- and -- and they said those
12 were synonyms meaning in relation with.
13 And if you substitute "in relation
14 with" into the language in the claims for both
15 "common" and "corresponding to," you get a
16 nonsense claim. You get something that doesn't
17 make any sense.
18 You get "dynamically displaying a first
19 indicator in one of a plurality of locations in
20 a bid display region, each location in the bid
21 display region in relationship with a price
22 level along a/in relationship with static price
23 axis."
24 And -- and so I think that's likely to
25 be an oversight, because my understanding is

1 JOHN PHILLIP MELLOR, Ph.D.
 2 that simply deleting the second "in relationship
 3 with," that -- that -- that's not appropriate.
 4 The inventors specifically chose the
 5 word "common." They put it in there for a
 6 purpose, so it must have a meaning.
 7 It's clear the word "common" probably
 8 shouldn't mean in relationship with. So it must
 9 mean something else. And -- and that's where
 10 the rest of this analysis goes with looking at,
 11 well, what would a -- a person of ordinary skill
 12 have -- have understood common to mean.
 13 Q. Did you complete a parallel analysis
 14 where you used the court's construction to see
 15 what the result would be on written description?
 16 MR. VOLLER: Form.
 17 THE WITNESS: I think I have -- I think I
 18 answered that -- that question. That's one of
 19 many pieces of evidence that indicates that
 20 there isn't written description support for a
 21 price column with only some prices being static
 22 and indicating that there is written description
 23 support only for a price column where all the
 24 prices are static.
 25 So I -- I'd really want the opportunity

1 JOHN PHILLIP MELLOR, Ph.D.
 2 I'm looking at your declaration, PDX 2362. And
 3 you have concluded -- it is your opinion that
 4 there is no written description support for a
 5 price column where some, but not all, of the
 6 prices are static; is that right?
 7 A. I believe that's correct, yes.
 8 Q. Okay. So applying the standards that
 9 you used to review the patent and the claim
 10 language, what would it take to provide written
 11 description support for that?
 12 MR. VOLLER: Form.
 13 THE WITNESS: I'm not sure.
 14 BY MR. SAMPSON:
 15 Q. Can -- can you give me an example of
 16 something that you are looking for?
 17 MR. VOLLER: Form.
 18 THE WITNESS: I'm a little confused by -- by
 19 the -- the question. I'm not sure I was looking
 20 for anything particular in one way or another.
 21 I looked at the -- you know, the -- the things
 22 that I looked at are spelled out in my
 23 declaration, and I -- I noted the things that I
 24 saw that gave evidence one way or the other.
 25

1 JOHN PHILLIP MELLOR, Ph.D.
 2 to think about it more clearly.
 3 But my initial reaction is even if you
 4 stick with the -- Judge Moran's claim
 5 construction, that doesn't provide written
 6 description support for a price axis where only
 7 some of the prices are static.
 8 All it does is remove this as one or
 9 lessen this as one of the factors indicating
 10 that there's no support for a price column where
 11 only some of the prices are static and that
 12 there is only written description support for a
 13 price column where all of the prices are static.
 14 MR. SAMPSON: Okay. Why don't we take one
 15 short last break.
 16 THE VIDEOGRAPHER: It's 4:28 p.m. We are
 17 going off the record.
 18 (Whereupon, a recess was had at
 19 4:28 p.m., after which the
 20 deposition was resumed at
 21 4:45 p.m. as follows:)
 22 THE VIDEOGRAPHER: It is 4:45 p.m. We are
 23 back on the record.
 24 BY MR. SAMPSON:
 25 Q. Dr. Mellor, if you could take your --

1 JOHN PHILLIP MELLOR, Ph.D.
 2 BY MR. SAMPSON:
 3 Q. If you saw an example in the patent
 4 that said, hey, these five levels in the middle
 5 are static and the levels above and below that
 6 are not, would that have changed your
 7 conclusion, if you saw that example in the
 8 patent?
 9 MR. VOLLER: Form. Incomplete hypothetical.
 10 THE WITNESS: Again, you know, that -- I
 11 didn't see that in the patent. It's -- it's
 12 quite possible that seeing that as an example in
 13 the patent would have changed my -- my
 14 conclusions, the opinions that I reached.
 15 You know, I would have to look at the
 16 exact specifics and -- and, you know, work
 17 through the analysis to do that.
 18 BY MR. SAMPSON:
 19 Q. Okay. Is -- in your review of the
 20 Trading Technologies patents, is there anything
 21 in the patents that suggests that you can make
 22 the price axis purple?
 23 MR. VOLLER: Form. Scope.
 24 THE WITNESS: I believe there is.
 25

1 JOHN PHILLIP MELLOR, Ph.D.
 2 BY MR. SAMPSON:
 3 Q. Okay.
 4 A. And I might be able to find that for
 5 you if you -- you wanted me to.
 6 Q. Sure. Yeah, if you can, that would be
 7 great.
 8 A. Okay. I'm not finding specifically
 9 purple. But what I was thinking of is --
 10 Q. I'm sorry to interrupt you. But if you
 11 could just identify for the record, you know,
 12 what exhibit you're looking or what page you're
 13 looking at, it will be more clear.
 14 A. Absolutely. Sorry. I'm looking at
 15 Exhibit 2 of the 2362 --
 16 Q. Okay.
 17 A. -- document, which is the '304 patent.
 18 Q. I have it.
 19 A. And in Column 13, I'm looking at
 20 dependent claims three and four, which talk
 21 about the orientation of the display. So it's
 22 not purple. But I think that's what I was
 23 thinking of.
 24 Q. Okay. So if -- I'm just trying to make
 25 sure that I have this accurate. If -- if you

1 JOHN PHILLIP MELLOR, Ph.D.
 2 comfortable giving an answer off the cuff about
 3 that.
 4 Having said that, I also note that in
 5 Column 14 of the same patent we were just
 6 discussing, dependent claims 24 and 25 say "the
 7 method of claim one wherein the bid and ask
 8 display regions are displayed in different
 9 colors," and then 25 goes on to say "the method
 10 of claim one wherein the first and second
 11 indicators are displayed in different colors."
 12 So, again, this is sort of pretty off
 13 the cuff. But color is mentioned there.
 14 Q. Okay. How about do you recall any
 15 discussion of color as applied to the price axis
 16 in the specification, you know, the portion of
 17 the patent preceding the claims?
 18 MR. VOLLER: Form. Scope.
 19 THE WITNESS: Again, the -- the task that I
 20 was asked to do was to look at and determine
 21 whether there was written description support
 22 for a price axis where all of the prices were
 23 static or whether there was written description
 24 support for a price axis where only some of the
 25 prices in the price column were static.

1 JOHN PHILLIP MELLOR, Ph.D.
 2 were asked to determine whether there's written
 3 description support in the patent for a purple
 4 price axis, would you conclude, based on claims
 5 three and four, that there is support or that
 6 there's no support?
 7 MR. VOLLER: Form. Scope.
 8 THE WITNESS: Well, that's --
 9 BY MR. SAMPSON:
 10 Q. I'm trying to figure out what your
 11 conclusion is.
 12 MR. VOLLER: Form. Scope.
 13 THE WITNESS: Well, I'm -- I'm -- I don't
 14 really feel comfortable making a conclusion
 15 at this -- at this point on whether you can make
 16 a purple price axis or not.
 17 BY MR. SAMPSON:
 18 Q. Okay.
 19 A. That's -- that's not the opinions
 20 that's in my declaration.
 21 Q. Right. Right. I understand that.
 22 A. And the -- you know, the analysis -- I
 23 spent a fair bit of time doing the analysis and
 24 trying to be careful. And so I don't -- I'm not
 25 sure that I can really, you know, feel

1 JOHN PHILLIP MELLOR, Ph.D.
 2 And so looking for whether there was
 3 any reference to color wasn't something that I
 4 was focused on.
 5 Having said that, I don't remember any.
 6 But I'd be happy to reread the patent for you
 7 and look and see if I can find any.
 8 BY MR. SAMPSON:
 9 Q. No. I think I will not ask you to do
 10 that at this hour. Thank you, though, for
 11 offering.
 12 I might come back to that if I think
 13 about something else on color.
 14 But for now let me ask you to look
 15 at -- do you have PDX 2362 in front of you
 16 still?
 17 A. Yes, sir, I do.
 18 Q. Okay. Let's turn to paragraph five,
 19 and I'm going to ask you some questions. I
 20 asked you very similar questions to this this
 21 morning. It was in regard to what you referred
 22 to in your expert report as TT's trifurcation
 23 interpretation of the static limitation, and now
 24 I'm going to ask you similar questions.
 25 And paragraph five makes reference to

1 JOHN PHILLIP MELLOR, Ph.D.
 2 TT's static interpretation. Do you see that?
 3 Actually, paragraphs four and five both make
 4 reference to TT's static interpretation.
 5 A. I see in paragraphs four and five that
 6 it refers to TT's static interpretation, where
 7 I'm describing what CQG's attorneys explained to
 8 me, yes.
 9 Q. Okay. And to be clear, you did not
 10 undertake to determine how TT is interpreting
 11 the static limitation in this case on your own;
 12 is that right?
 13 MR. VOLLER: Form.
 14 THE WITNESS: That's correct. All -- all --
 15 with regard to written description, my opinions
 16 looked at whether there was written description
 17 support for a price column where all the prices
 18 were static or whether there was written
 19 description support for a price column where
 20 only some of the prices were static.
 21 BY MR. SAMPSON:
 22 Q. Okay. So if you could turn to
 23 paragraph 108, your conclusion on page 57. And
 24 I'll give you a chance to read that. Let me
 25 know when you're done.

1 JOHN PHILLIP MELLOR, Ph.D.
 2 And unless TT's static interpretation
 3 is that all of the prices in the price column
 4 must be static, then -- then I think this is
 5 correct as written.
 6 Q. That's -- that's interesting, because I
 7 thought that you had said repeatedly throughout
 8 the day that the two things that you looked at
 9 are whether there's written description support
 10 for a price column in which all the levels are
 11 static or a price column in which some, but not
 12 all, are static.
 13 And -- and I didn't understand from
 14 what you were saying earlier today that you
 15 looked at any other possible interpretation.
 16 MR. VOLLER: Form.
 17 THE WITNESS: So what I -- what I just said
 18 was that I did look at written description
 19 support for whether all prices in the price
 20 column must be static or whether there's written
 21 description support for a price column where
 22 only some of the prices.
 23 And -- and what I'm saying is that
 24 unless -- my conclusion is that there is no
 25 written description support for a price column

1 JOHN PHILLIP MELLOR, Ph.D.
 2 A. Okay.
 3 Q. Okay. So I am not taking issue with
 4 the second and third sentences of that
 5 paragraph. I understand that that is what you
 6 endeavored to do and that those are your
 7 opinions.
 8 But if I tell you that this declaration
 9 does not accurately characterize TT's static
 10 interpretation -- do you see what I'm saying?
 11 Does -- do you then understand that the first
 12 and last sentence of paragraph 108 are
 13 inaccurate?
 14 MR. VOLLER: Form. Scope. Incomplete
 15 hypothetical.
 16 THE WITNESS: I'm not sure that I would agree
 17 with what you just said.
 18 BY MR. SAMPSON:
 19 Q. Okay. Why is that?
 20 A. Well, the analysis that I performed was
 21 whether there was written description support
 22 for a price column where all of the prices are
 23 static or whether there was written description
 24 support for a price column where only some of
 25 the prices are static.

1 JOHN PHILLIP MELLOR, Ph.D.
 2 where only some of the prices are static. There
 3 is only written description support for a price
 4 column where all of the displayed prices are
 5 static. And unless TT's static interpretation
 6 is the latter, all of the prices in the price
 7 column must be static, then -- then it is true.
 8 BY MR. SAMPSON:
 9 Q. Okay. But you have defined TT's static
 10 interpretation in paragraph four, right?
 11 A. I -- paragraph four says "CQG's
 12 attorneys explained that TT is interpreting the
 13 claim terms 'common static price axis' and
 14 'static display of prices' collectively. The
 15 static limitation of the independent claims of
 16 the '304 and '132 patents as covering both a
 17 price column where all prices are static and a
 18 price column where only some of the price levels
 19 in the column are static and other displayed
 20 prices are dynamic."
 21 I'll refer to TT's interpretation
 22 and/or application of the patents in this manner
 23 as TT's static interpretation.
 24 Q. Okay.
 25 A. And I think that's direct -- very

1 JOHN PHILLIP MELLOR, Ph.D.
2 consistent with what I -- what I just explained.

3 Q. Right. And -- and what I asked you to
4 assume in my hypothetical is that that is
5 inaccurate. Assume that it is an inaccurate
6 definition of TT's static interpretation. Okay?

7 If it is inaccurate, if that definition
8 that CQG attorneys provided to you is an
9 inaccurate statement of TT's static
10 interpretation, how can paragraph 108 be
11 accurate?

12 MR. VOLLER: Form. Incomplete hypothetical.

13 THE WITNESS: It depends on how it's
14 inaccurate. And I gave you an example of
15 where -- where it might be inaccurate, and I
16 gave you an example of some places where it
17 would still be accurate.

18 So it depends on -- I don't understand,
19 I guess, the hypothetical. It depends on
20 exactly what's wrong about it.

21 BY MR. SAMPSON:

22 Q. Okay. So looking at the second
23 sentence of the conclusion, is it your
24 opinion -- it is your opinion, right, that
25 there's no written description support for a

1 JOHN PHILLIP MELLOR, Ph.D.
2 that correct?

3 MR. VOLLER: Form.
4 BY MR. SAMPSON:

5 Q. What you just said with respect to
6 paragraph 108?

7 A. That's -- paragraph 108 is the extent
8 of my opinion with regard to written description
9 for a price column where all the prices are
10 static or written description for a price column
11 where only some of the prices are static.

12 Q. And just to be clear, your -- your
13 conclusion is that price column where all the
14 prices are static, there is written description
15 support, correct?

16 A. That is correct.

17 Q. Right?

18 A. What -- what I said is, instead, the
19 inventors were only in possession of a graphical
20 user interface with a price column where all
21 prices displayed in the column are static.

22 Q. Okay. And -- but you -- your
23 conclusion was there's no written description
24 support for the other thing that you looked for,
25 which was price column where some, but not all,

1 JOHN PHILLIP MELLOR, Ph.D.
2 price level where some -- excuse me -- a price
3 column where some, but not all, of the prices
4 are static?

5 A. I think that's exactly what that
6 sentence says.

7 Q. Okay.

8 A. The inventors were not in possession of
9 a graphical user interface with a price column
10 where only some, but not all, displayed price
11 levels are static.

12 Q. Okay.

13 A. And that is my conclusion.

14 Q. And you are not opining that any claims
15 are invalid, are you?

16 A. No. No. My task was to look at
17 written description and -- and see if there's
18 written description support for a price column
19 with only some prices being static and look to
20 see if there's written description support for a
21 price column where all of the prices are static.
22 And -- and that's -- those -- those opinions are
23 summarized here in paragraph 108.

24 Q. Okay. And -- and that's the extent?
25 That's -- that's the extent of your opinion; is

1 JOHN PHILLIP MELLOR, Ph.D.
2 of the prices are static?

3 A. That's correct. I found no written
4 description support for that case where -- of a
5 price column where -- that had only some of the
6 prices being static.

7 MR. SAMPSON: Okay. Okay. All right. I
8 think -- I think we're completed for today. Do
9 you guys want to ask some questions?

10 MR. VOLLER: I'd like to take a break and we
11 can come back in a few minutes.

12 MR. SAMPSON: Sure.

13 THE VIDEOGRAPHER: It is 5:05 p.m. We will
14 go off the record.

15 (Whereupon, a recess was had at
16 5:05 p.m., after which the
17 deposition was resumed at
18 5:10 p.m. as follows:)

19 THE VIDEOGRAPHER: It is 5:10 p.m. We are
20 back on the record.

21 MR. VOLLER: We have no questions. We would
22 like to rest.

23 MR. SAMPSON: Okay. Thank you for your time,
24 Dr. Mellor.

25 MR. VOLLER: Thank you.

1 JOHN PHILLIP MELLOR, Ph.D.
 2 THE VIDEOGRAPHER: So it is the end of the
 3 deposition of Dr. Mellor. It is 5:10 p.m. We
 4 are going off the record.
 5 (Whereupon, the proceedings
 6 adjourned at 5:10 p.m.)
 7 (Whereupon, the witness was
 8 excused.)
 9
 10
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1 STATE OF ILLINOIS)
 2) SS:
 3 COUNTY OF LAKE)
 4
 5 I, CHERYL L. SANDECKI, a notary public
 6 within and for the County of Lake County and
 7 State of Illinois, do hereby certify that
 8 heretofore, to-wit, on April 25, 2014,
 9 personally appeared before me, at 300 South
 10 Wacker Drive, Chicago, Illinois, JOHN PHILLIP
 11 MELLOR, PH.D., in a cause now pending and
 12 undetermined in the United States District,
 13 wherein TRADING TECHNOLOGIES INTERNATIONAL,
 14 INC., is the Plaintiff, and CQG, INC., and CQGT,
 15 LLC, are the Defendants.
 16 I further certify that the said JOHN
 17 PHILLIP MELLOR, Ph.D. was first administered an
 18 oath to testify the truth, the whole truth and
 19 nothing but the truth in the cause aforesaid;
 20 that the testimony then given by said witness
 21 was reported stenographically by me in the
 22 presence of the said witness, and afterwards
 23 reduced to typewriting by Computer-Aided
 24 Transcription, and the foregoing is a true and
 25 correct transcript of the testimony so given by

1 IN THE UNITED STATES DISTRICT COURT
 2 NORTHERN DISTRICT OF ILLINOIS
 3 EASTERN DIVISION
 4 TRADING TECHNOLOGIES
 5 INTERNATIONAL, INC.,
 6
 7 Plaintiff,
 8 No. 05-CV-4811
 9 vs.
 10
 11 CQG, INC., and CQGT, LLC,
 12
 13 Defendants.
 14
 15 I, JOHN PHILLIP MELLOR, Ph.D., being
 16 first administered an oath, say that I am the
 17 deponent in the aforesaid deposition taken on
 18 April 25, 2014; that I have read the foregoing
 19 transcript of my deposition, and affix my
 20 signature to same.
 21
 22 _____
 23 JOHN PHILLIP MELLOR, Ph.D.
 24
 25 Subscribed and sworn to
 before me this day
 of , 2014.

 Notary Public

1 said witness as aforesaid.
 2 I further certify that the signature to
 3 the foregoing deposition was reserved by counsel
 4 for the respective parties and that there were
 5 present at the deposition the attorneys
 6 hereinbefore mentioned.
 7 I further certify that I am not counsel
 8 for nor in any way related to the parties to
 9 this suit, nor am I in any way interested in the
 10 outcome thereof.
 11 IN TESTIMONY WHEREOF: I certify to the
 12 above facts this 6th day of May, 2014.
 13
 14
 15
 16
 17
 18 _____
 19 CHERYL L. SANDECKI, CSR, RPR
 20 LICENSE NO.: 084-03710
 21
 22
 23
 24
 25

1 ERRATA SHEET
2 TRANSPERFECT DEPOSITION SERVICES
3 216 E. 45th Street, Suite 903
4 New York, New York 10017
5 212-400-8845

6 CASE: Trading Technologies v. CQG, Inc.

7 PAGE LINE FROM TO

8			
9			
10			
11			
12			
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16			
17			
18			
19			

20 _____
21 JOHN PHILLIP MELLOR, Ph.D.

22 Subscribed and sworn to before me
23 this ____ day of _____, 2014.

24 _____
25 Notary Public

Exhibit K

FILED UNDER SEAL

From: Mark Fischer <mfischer@cqgexchangemail.com>
Sent: Friday, May 27, 2011 10:04 AM
To: Josef Schroeter <josef@cqg.com>
Subject: Trading Interfaces
Attach: image001.jpg

Joe:


Is the argument that we have a static ladder the following:

- 1) CQG argues that it's ladder is not static because the inside market always stays on the screen.
- 2) However, what is really happening is that the inside market is just another ladder that overlays the static ladder in something CQG calls a "market window". The underlying ladder is, in fact, static. The prices in the underlying ladder only move when the user makes them move.

I have to say that I agree with you. That argument is fairly persuasive.

Here's another problem. On the Order Ticket, I've always thought that the ladder displayed is just a display of DOM and a display of the user's working orders. However, once an order is placed, the user can actually use the icon representing his working order to modify that order. He can drag it up and down the scale to change the price and he can change the quantity for the working order in the same manner that you would on a DOM ladder.

I think that the ability to drag the icon representing your order up and down the scale infringes some patent claim.

 Description:

Mark Fischer
mfischer@cqg.com

Celebrating 30 years of reliability, performance, and innovation.

Exhibit L

FILED UNDER SEAL

TT has reformatted this email from the condition that it exists in TT's possession for readability purposes only. An unmodified copy of this email as it exists in TT's possession is also attached.

DATE: 2007-03-23 03:20:49

FROM: Fischer, Mark W. <mfischer@faegre.com>

TO: Carden, Richard <carden@mbhb.com>, <ajohnstone@winston.com>, <anaidech@salans.com>, <b_norkett@hotmail.com>, <gabaker@dowellbaker.com>, <hboice@bellboyd.com>, <jlervick@bellboyd.com>, <jschulman@wolinlaw.com>, <kcenar@bellboyd.com>, <lholzman@alston.com>, <lmoffatt@salans.com>, Natalie Clayton <natalie.clayton@alston.com>, <pbennett@alston.com>, <rperkins@winston.com>, <wscott@alston.com>

SUBJECT: RE: TT v. CQG

MAILBOX: 20121019attempt2007.mbox

Richard:

Your letter dated March 22, 2007, regarding the operation of CQG's products is largely accurate but requires a few clarifications.

First, my description over the phone regarding the operation of the price scale in CQG's products was directed to the order entry module which TT expressly accused of infringement in its Preliminary Infringement Contentions filed January 23, 2006. That module is entitled DOMTrader. CQG has other order entry modules, including one call Order Ticket, which operate much differently than DOMTrader and which clearly don't infringe TT's patents for a variety of reasons. My statements regarding the operation of the price scale should not be understood to describe the operation of those other order entry modules.

Second, while we agree with your description of the first mode of operation, we would describe the second mode somewhat differently. A more accurate description would be, "In the second mode, as the inside market moves to the edge of the visible screen, the prices displayed are automatically repositioned such that the inside market remains visible on the screen although the automatic repositioning of the prices does not necessarily place the inside market in the center of the screen. This automatic repositioning of the displayed prices cannot be turned off by the user."

Third, since the development of the first mode of operation (development which occurred after the inception of TT's suit against CQG), CQG has sold its software to some, but not all, customers where the only mode of operation of DOMTrader available to the user is the first mode of operation.

Finally, your letter, as modified by this email, is not a complete description of the operation of DOMTrader. It is only a description of how the display of prices operates. Neither you nor I have made any attempt to describe the other aspects of DOMTrader including, but not limited to, the number of user actions required to place a trade, the nature of the "order entry region", and the depth of market display. Obviously, CQG's actual product is the true evidence of how DOMTrader operates and the purpose of our communications on this subject is simply to facilitate your supplementation of TT's Preliminary Infringement Contentions against CQG.

Thank you for your attention to this email. While I'm happy to have these conversations about CQG's product, I'm somewhat surprised that they are necessary. It is my understanding that TT has had CQG's software running in its offices for years. It would seem that TT could determine how CQG's software operates for itself. Nonetheless, please let me know if you have any questions or concerns.

Mark W. Fischer
Faegre & Benson LLP
Fifteenth Street
Boulder, CO 80302-5414
303-447-7793 / FAX 303-447-7800
MFischer@faegre.com
http://www.faegre.com/lawyer_bio.aspx?key 982
<http://www.faegre.com/>

DATE: 2007-03-23 03:20:49

FROM: Fischer, Mark W. <mfischer@faegre.com>

TO: Carden, Richard <carden@mbhb.com>, <ajohnstone@winston.com>, <anaidech@salans.com>, <b_norkett@hotmail.com>, <gabaker@dowellbaker.com>, <hboice@bellboyd.com>, <jlervick@bellboyd.com>, <jschulman@wolinlaw.com>, <kcenar@bellboyd.com>, <lholzman@alston.com>, <lmoffatt@salans.com>, Natalie Clayton <natalie.clayton@alston.com>, <pbennett@alston.com>, <rperkins@winston.com>, <wscott@alston.com>

SUBJECT: RE: TT v. CQG

MAILBOX: 20121019attempt2007.mbox

<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">

<HTML xmlns:o = "urn:schemas-microsoft-com:office:office" xmlns:st1 "urn:schemas-microsoft-com:office:smarts" ><HEAD>

<META content="MSHTML 6.00.2900.3059" name=GENERATOR></HEAD>

<BODY>

<DIV>Richard:</DIV>

<DIV> </DIV>

<DIV>Your letter dated March 22, 2007, regarding the operation of CQG's products is largely accurate but requires a few clarifications.</DIV>

<DIV> </DIV>

<DIV>First, my description over the phone regarding the operation of the price scale in CQG's products was directed to the order entry module which TT expressly accused of infringement in its Preliminary Infringement Contentions filed January 23, 2006. That module is entitled DOMTrader. CQG has other order entry modules, including one call Order Ticket, which operate much differently than DOMTrader and which clearly don't infringe TT's patents for a variety of reasons. My statements regarding the operation of the price scale should not be understood to describe the operation of those other order entry modules.</DIV>

<DIV> </DIV>

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<DIV> </DIV>

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<DIV> </DIV>

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<DIV> </DIV>

<DIV>Thank you for your attention to this email. While I'm happy to have these conversations about CQG's product, I'm somewhat surprised that they are necessary. It is my understanding that TT has had CQG's software running in its offices for years. It would seem that TT could determine how CQG's software operates for itself. Nonetheless, please let me know if you have any questions or concerns.</DIV>

<DIV><!-- Converted from text/rtf format -->

<P>Mark W. Fischer
Faegre & Benson LLP
1900 Fifteenth Street
Boulder, CO 80302-5414
303-447-7793 / FAX 303-447-7800
MFischer@faegre.com
<U>Biography</U> | <U>www.faegre.com</U></P></DIV></BODY></HTML>

Xu, Ling

From: usdc_ecf_ilnd@ilnd.uscourts.gov
Sent: Friday, May 16, 2014 11:31 PM
To: ecfmail_ilnd@ilnd.uscourts.gov
Subject: Activity in Case 1:05-cv-04811 Trading Technologies International, Inc. v. CQG et.al sealed response

This is an automatic e-mail message generated by the CM/ECF system.

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United States District Court
Northern District of Illinois - CM/ECF LIVE, Ver 6,1

Notice of Electronic Filing

The following transaction was entered by Orth, Andrea on 5/16/2014 11:31 PM CDT and filed on 5/16/2014

Case Name: Trading Technologies International,
Inc. v. CQG et.al
Case Number: 1:05-cv-04811 <https://ecf.ilnd.uscourts.gov/cgi-bin/DktRpt.pl?190845>

Filer: Trading Technologies International,
Inc.

Document Number: 752

Copy the URL address from the line below into the location bar
of your Web browser to view the document:

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Docket Text:

SEALED RESPONSE by Trading Technologies
International, Inc. to statement, [719] <i>AND STATEMENT OF UNDISPUTED
MATERIAL FACTS IN SUPPORT OF ITS PARTIAL SUMMARY JUDGMENT THAT THE STATIC
LIMITATIONS MEET THE WRITTEN DESCRIPTION REQUIREMENT</i> (Attachments:
(1) Exhibit I-L)(Orth, Andrea)

1:05-cv-04811 Notice has been electronically mailed to:

Adam Glenn Kelly
akelly@loeb.com, chdocket@loeb.com, mmarshall@loeb.com, skunzendorf@loeb.com

Alan Wayne Krantz
krantz@mbhb.com

Andrea Kay Orth
orth@mbhb.com, poulakos@mbhb.com

Brandon J Kennedy
kennedy@mbhb.com

Christopher D Butts
butts@mbhb.com

George I. Lee
lee@mbhb.com

Jennifer M Kurcz
kurcz@mbhb.com

Jeremy E. Noe
noe@mbhb.com

Johnnet Simone Jones
sjones@loeb.com, chdocket@loeb.com, poliosi@loeb.com

Kara Eve Foster Cenar
kara.cenar@bryancave.com, carol.duracka@bryancave.com, chdocketing@bryancave.com

Kirsten L. Thomson
thomson@mbhb.com, cross-jones@mbhb.com, dineen@mbhb.com, poulakos@mbhb.com,
xu@mbhb.com

Leif R. Sigmond
, Jr sigmond@mbhb.com

Mariangela M. Seale
merili.seale@bryancave.com, CHDocketing@bryancave.com, lisa.held@bryancave.com

Matthew J. Sampson
sampson@mbhb.com

Michael David Gannon
gannon@mbhb.com, becker@mbhb.com

Michelle Lynn McMullen-Tack
mcmullen-tack@mbhb.com

Paul H. Berghoff
berghoff@mbhb.com

Paul S. Tully
tully@mbhb.com

S. Richard Carden
carden@mbhb.com, santoyo@mbhb.com

Steven F. Borsand
steve.borsand@tradingtechnologies.com

William Joshua Voller
wvoller@loeb.com, akorolyova@loeb.com, chdoCKET@loeb.com, poliosi@loeb.com

1:05-cv-04811 Notice has been delivered by other means to:

The following document(s) are associated with this transaction:

Document description: Main Document

Original filename: n/a

Electronic document Stamp:

[STAMP dcecfStamp_ID=1040059490 [Date=5/16/2014] [FileNumber=13037820-0]
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Document description: Exhibit I-L

Original filename: n/a

Electronic document Stamp:

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e2f2296fd17d38361a2a110909525]]

**IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION**

Trading Technologies International, Inc.	)	Civil Action No. 05-4811
)	
Plaintiff,	)	Judge Sharon Johnson Coleman
)	
v.	)	Magistrate Sidney I. Schenkier
)	
CQG, Inc. and CQGT, LLC)	
)	
Defendants.)	
)	

**DECLARATION OF JENNIFER M. KURCZ IN SUPPORT OF TT’S RESPONSE TO
CQG’S MOTION FOR SUMMARY JUDGMENT THAT THE ‘304 AND ‘132 PATENTS
ARE INVALID UNDER 35 U.S.C. § 112, ¶ 1 FOR LACK OF WRITTEN DESCRIPTION**

1. I am an attorney for TT in the above-captioned action. I make this declaration based on personal knowledge and am competent to testify herein.

2. Listed below are the exhibits attached to the Declaration of William J. Voller in Support of CQG’s Motion for Summary Judgment that the ‘304 and ‘132 Patents are Invalid Under 35 U.S.C. § 112, ¶ 1 for Lack of Written Description. Dkt. 720. The list below is provided for the sake of convenience and continuity of exhibit numbering. To avoid redundancy, additional copies of these exhibits are not attached to this declaration.

Exhibit	Description
A	United States Patent No. 6,766,304
B	United States Patent No. 6,772,132
C	Trading Technologies’ Amended Final Infringement Contentions (November 26, 2013) (with Exhibits A-B)
D	Expert Declaration of John Phillip Mellor, Ph.D. and Exhibits 1-18

Exhibit	Description
E	Feb. 19, 2014 Ellis Technology Tutorial Hr.g, <i>Trading Techs. Int'l, Inc. v. GL Trade</i> , 05-cv-4120 (N.D. Ill. 2005)
F	CQG's Third Set of Interrogatories To Trading Technologies (No. 25) (June 29, 2013)
G	Plaintiff Trading Technologies' Amended Response to Defendants' Third Set of Interrogatories (No. 25) (Sept. 4, 2013)
H	CQG's 27th Amended Objections and Responses to TT's Amended Interrogatory Nos. 17-21 (Sept. 20, 2013) (exhibits omitted)

3. Attached to this declaration are true and accurate copies of the exhibits referenced by TT in its 1) Responses and Objections to CQG's Statement of Undisputed Material Facts in Support of its Motion for Summary Judgment and 2) Statement of Undisputed Material Facts in Support of its Cross-Motion for Summary Judgment that the Patents-in-Suit are Not Invalid for Lack of Written Description.

Exhibit	Description
I	Expert Declaration of Dr. Craig Pirrong, Ph.D. and Exhibits 1-5 [FUS]
J	Deposition Transcript of Dr. Phillip Mellor dated April 25, 2014 [FUS]
K	CQG5493020, Email from Mark Fischer to Josef Schroeter dated May 27, 2011 [FUS]
L	Email from Mark Fischer to Richard Carden dated March 23, 2007 [FUS]
M	Unpublished Cases

Respectfully submitted,

Date: May 16, 2014

s/ Jennifer M. Kurcz
 Leif R. Sigmond, Jr. (ID No. 6204980)
 (sigmond@mbhb.com)
 Matthew J. Sampson (ID No. 6207606)
 (sampson@mbhb.com)
 S. Richard Carden (ID No. 6269504)
 (carden@mbhb.com)

Jennifer M. Kurcz (ID No. 6279893)

(kurcz@mbhb.com)

Andrea K. Orth (ID No. 6301900)

(orth@mbhb.com)

Brandon J. Kennedy (ID No. 6306310)

(kennedy@mbhb.com)

McDonnell Boehnen Hulbert & Berghoff LLP

300 South Wacker Drive

Chicago, Illinois 60606

Tel.: (312) 913-0001

Fax: (312) 913-0002

Steven F. Borsand (ID No. 6206597)

(Steve.Borsand@tradingtechnologies.com)

Trading Technologies International, Inc.

222 South Riverside

Suite 1100

Chicago, IL 60606

Tel: (312) 476-1000

Fax: (312) 476-1182

Attorneys for Plaintiff,

TRADING TECHNOLOGIES

INTERNATIONAL, INC.

CERTIFICATE OF SERVICE

I certify that a copy of the foregoing DECLARATION OF JENNIFER M. KURCZ was served on May 16, 2014 as follows:

Via Filing Via this Court's CM-ECF System, which caused a copy to be served on all registered users and Via E-mail:

Counsel for CQG, Inc., and CQGT, LLC:

Adam G. Kelly
Loeb & Loeb LLP
321 N. Clark Street, Suite 2300
Chicago, IL 60654
akelly@loeb.com

Johnnet Simone Jones
Loeb & Loeb LLP
321 N. Clark Street, Suite 2300
Chicago, IL 60654
sjones@loeb.com

William Joshua Voller
Loeb & Loeb LLP
321 N. Clark Street, Suite 2300
Chicago, IL 60654
wvoller@loeb.com

s/ Jennifer M. Kurcz _____

Case: 1:05-cv-04811 Document #: 753-1 Filed: 05/16/14 Page 1 of 6 PageID #:20925

Exhibit M

2007 WL 275928

Only the Westlaw citation is currently available.
United States District Court,
D. Delaware.

INLINE CONNECTION CORPORATION,
Broadband Technology Innovations,
LLC, and PIE Squared, LLC, Plaintiffs,

v.

AOL TIME WARNER
INCORPORATED, et al., Defendants.
INLINE CONNECTION CORPORATION,
Broadband Technology Innovations,
LLC, and PIE Squared, LLC, Plaintiffs,

v.

EARTHLINK, INC., Defendant.

No. CIVA 02-272MPT, CIVA
02-477 MPT. | Jan. 29, 2007.

Attorneys and Law Firms

Julia Heaney, Thomas C. Grimm, Morris, Nichols, Arsht & Tunnell, Wilmington, DE, for Plaintiffs.

Chad Michael Shandler, Kelly E. Farman, Richards, Layton & Finger, Gary William Lipkin, Duane Morris LLP, Wilmington, DE, for Defendants.

Opinion

MEMORANDUM ORDER

THYNGE, Magistrate J.

I. INTRODUCTION

*1 This is a patent infringement case. Inline Communication Corporation¹ (“Inline”) sued America Online Inc. (“AOL”) on April 12, 2002, and EarthLink, Inc. (“EarthLink”) on June 4, 2002, alleging infringement of U.S. Patent Nos. 5,844,596 (“the ‘596 patent”), 6,243,446 (“the ‘446 patent”), and 6,236,718 (“the ‘718 patent”).²

Inline filed two separate motions³ requesting that the court preclude defendants’ invalidity expert, David L. Waring, from offering certain testimony at trial. Inline’s motion under

consideration is directed at Waring’s April 18, 2006 Expert Report (the “April 18 Report”) reciting his opinions of lack of enablement and obviousness.⁴ Inline contends that the opinions recited therein are the product of improper standards and unreliable methods. For the reasons discussed, Inline’s motion will be granted in part and denied in part.

II. POSITIONS OF THE PARTIES

Plaintiffs contend that Waring’s opinions on enablement and obviousness are unreliable and, therefore, will not assist the trier of fact and should be excluded under [Federal Rule of Evidence 702](#).

Inline first argues that the enablement analysis recited in the April 18 Report is unreliable because it concerns only whether the patents enable *the accused infringing system*, not whether they enable the claimed invention as required under a proper enablement analysis. Inline concludes, therefore, that Waring’s use of the purportedly incorrect legal standard renders his enablement testimony unreliable. Inline also argues that Waring ignored several secondary considerations in forming his obviousness opinions and, as a result, his opinion on obviousness is unreliable.

Defendants contend that Inline misstates the law of enablement and obviousness and should be denied. Defendants argue that the crux of Inline’s argument on enablement is that Waring did not consider enablement of the claimed invention, but rather considered enablement of the accused product (ADSL) and, therefore, applied the wrong law, thereby rendering his methodology fatally flawed. Defendants maintain that Inline’s argument is largely one of semantics and without merit. Accordingly to defendants, in determining what the “full scope” of the claims is, Waring merely assumed Inline’s contention that ADSL falls within the scope of the claims. Defendants analyze that since ADSL is an end-to-end digital transmission system spanning potentially thousands of feet of telephone lines using frequencies up to 1 MHZ and if Inline is correct that a system utilizing the public telephone network over a distance of several miles is within the scope of the claims, then it necessarily follows that such a system must be enabled by the specification of the patents-in-suit.

Defendants also state that Inline ignores the Federal Circuit’s requirement that the patent specification must enable the full scope of the claims, and has expressly endorsed defendants’

enablement analysis in *Plant Genetic Sys. v. DeKalb Genetics Corp.*⁵ Defendants emphasize the Federal Circuit's comment that "PSG [the patent holder] concedes that the cell claims cover monocot cells. Only by doing so can PSG sue DeKalb, which makes monocot products, for infringement." Defendants note because the patent at issue in *Plant Genetic* did not enable monocot cells—*i.e.*, the element accused of infringing the claims—the Federal Circuit held that the patent was not enabled. Consistent with *Plant Genetic*, defendants contend that Waring evaluated the common specification and determined that it does not teach how to transmit digital signals over several miles over the public telephone network and thus, the specification does not enable the broad patent claims asserted here, rendering them invalid.

*2 With regard to Waring's opinion on obviousness, defendants maintain that Inline misapprehends the role of secondary considerations of non-obviousness in the analysis of whether a patent claim is invalid under 35 U.S.C. § 103. They contend that Inline asserts, without support, that experts in patent cases are *required* to provide detailed analysis of every single factor ever identified by the Federal Circuit as potentially pertinent to the obviousness inquiry.⁶ Since secondary considerations are a means for a *patentee* to rebut a *prima facie* showing of obviousness, defendants argue that they do not bear the burden of showing the absence of such factors, and Waring had no obligation to analyze any secondary considerations of non-obviousness in setting forth his *prima facie* case of invalidity. Defendants maintain that Waring actually gave more thought to secondary considerations than Inline's own validity expert, (including the failure of others to solve the problem addressed by the patents and long-felt need to do so), and concluded that they cannot overcome defendants' *prima facie* showing of obviousness. Defendants conclude that Waring's expert opinions on enablement and obviousness are, thus, firmly grounded on correct legal standards and Inline's motion should be denied.

Inline responds that defendants concede that Waring did not evaluate whether the patent enabled the claimed invention and that Waring's opinion was limited to whether the patent enabled the accused system. Inline contends that, according to defendants' logic, if the accused system infringes the patents-in-suit, then the accused system must define the full scope of the claimed system, and therefore the specification must enable the accused system. According to Inline, the flaw in this logic is that the accused system-infringing or not—does *not* define the full scope of the claimed system. Rather, the

full scope of the claimed system is defined by the claim terms as construed by the courts. Thus, a proper enablement analysis consists of comparing the claims as construed to the specification to see if they are enabled, but Waring did not do this.

Regarding obviousness, Inline argues that there is no case law which allows an expert to ignore secondary considerations. Inline contends that the Federal Circuit has clearly stated that "evidence of secondary considerations may often be *the most probative and cogent evidence* in the record. It may often establish that an invention appearing to have been obvious in light of the prior art was not."⁷

Inline also cites the requirement of Rule 702 that expert opinions be the product of reliable principles and methods that have been applied reliably to the facts of the case. Inline concludes in light of the importance that the Federal Circuit places on secondary considerations, they constitute well-known principles that other experts would consider when rendering an invalidity opinion, and thus, the failure of Waring to consider such principles or use methods typically considered or used by other experts (that is, by ignoring evidence of secondary considerations that Inline claims to exist) renders his opinion unreliable.⁸

*3 Inline also relies on Federal Rule of Civil Procedure ("FRCP") 26(a)(2)(B). Inline claims that Waring's report fails to meet this rule because as an expert, Waring must set forth "a complete statement of all opinions to be expressed and the basis therefore," including "data or other information considered by the witness in forming the opinions..." Because Waring does not address all secondary considerations, Inline argues that Waring's analysis is incomplete and thus, unreliable.

III. DISCUSSION

Federal Rule of Civil Procedure 26(a)(2)(B) requires an expert report to "contain a complete statement of all opinions to be expressed and the basis and reasons therefore." Rule 26(a)(2)(C) also states that "[t]he parties shall supplement these disclosures when required under subdivision (e)(1)." Rule 26(e)(1) provides that "a party is under a duty to supplement ... its disclosures under subdivision (a)" when the information previously disclosed is incomplete or incorrect and the additional or corrective information has not been provided to the other parties during the discovery process.

Further, in the case of an expert who is required to provide a report pursuant to 26(a)(2)(B), the obligation to supplement extends to the information contained in the report and through deposition of the expert.

The determination of whether to exclude evidence is committed to the court's discretion. The Third Circuit has noted, however, that:

While evidentiary ruling are generally subject to a particularly high level of deference because the trial court has a superior vantage point to assess the evidence ..., evaluating the reliability of scientific methodologies and data does not generally involve assessing the truthfulness of the expert witnesses and thus is often not significantly more difficult on a cold record. Moreover, here there are factors that counsel in favor of a hard look at (more stringent review of) the district court's exercise of discretion. For example, because the reliability standards of Rules 702 and 703 is somewhat amorphous, there is a significant risk that district judges will set the threshold too high and will in fact force plaintiffs to prove their case twice. Reducing this risk is particularly important because the Federal Rules of Evidence display a preference for admissibility.

The Third Circuit also noted that “the exclusion of critical evidence is an ‘extreme’ sanction, not normally to be imposed absent a showing of willful deception or ‘flagrant disregard’ of a court order by the proponent of the evidence,”⁹ and identified several factors for the court to consider in deciding whether to exclude testimony:

(1) the prejudice or surprise in fact of the party against whom the excluded witnesses would have testified, (2) the ability of that party to cure the prejudice, (3) the extent to which waiver of the rule against calling unlisted witnesses would disrupt the orderly and efficient trial of the case or of other cases in the court, and (4) bad faith or willfulness in failing to comply with the district court's order.¹⁰

*4 The Third Circuit clearly emphasized that “the importance of the excluded testimony’ should be considered.”¹¹

None of the cases cited by defendants hold that the patent must enable the accused product, nor that the accused product is what defines the full scope of the invention and defendants' reliance on *Plant Genetic* for this proposition is misplaced. The patent in that case taught a genetically engineered plant cell that could prevent herbicides from blocking the function of glutamine synthetase. The parties had *stipulated* for construction purposes that the scope of certain claims was construed to cover all plant cells, both “monocot” plants and “dicot” plants. Thus “whether the cell claims of the '236 patent, which are *agreed by the parties* literally to cover all plant cells [monocots and dicots], were enabled for monocots on March 11, 1987” was the issue.¹² In other words, the district court looked at the claim terms as construed and evaluated whether the specification enabled it—just as the law requires.¹³ That the claim had to read onto monocots in order to sustain the plaintiff's infringement claim was an interesting side story, but, contrary to defendants' assertion, did not factor into the court's enablement decision.¹⁴ Thus, *Plant Genetic* actually undermines defendants' argument.

By requiring that the patent enable an end-to-end ADSL system, defendants ignore the rule that the specification “need not enable anything broader than the scope of the claims.”¹⁵ This protects patentees from having someone avoid infringement merely by adding one additional element to an otherwise infringing product.¹⁶ This distinction is particularly important in the present matter because the accused system contains features that are not part of the claimed system, but which Waring contends must be enabled by the specification. For example, according to Waring, “ADSL is designed to operate over distances of up to approximately three miles [approx. 18,000 feet] and do so without any additional amplification mid-way along the transmission path.” He concludes that 1,000 feet is the farthest distance discussed in the patent specifications, and therefore, the patents do not enable one of ordinary skill in the art to make an ADSL system which operates distances of 18,000 feet. Inline's expert, Jackson explains that the patents need not enable a distance of 18,000 feet let alone an entire ADSL system: “the patents do not teach television or ADSL or Ethernet. Rather, they teach a system that allows one to transmit television or ADSL or Ethernet or yet-uninvented signals on telephone wiring without interference

to the telephone service on that wiring.... But, someone provisioning ADSL can elect to use the invention of the patents in suit in order to gain the efficiencies that the invention delivers.”

Thus, while defendants' ADSL service allegedly uses the claimed system to infringe, that does not mean that the patent specification must enable the ADSL service as opposed to merely the claimed system.¹⁷

*5 At no time did Waring evaluate whether the patents would enable one of skill in the art to make or use *the claimed invention* without undue experimentation. Indeed, Waring contends-incorrectly-that the claimed invention involves only the transmission of analog video signals over existing telephone wiring. Yet, he never evaluated whether the patents would have enabled one to practice *that* invention. Because Waring did not conduct a proper enablement analysis, his opinion is not reliable and is not admissible on enablement.¹⁸ As a result, Waring's opinion and testimony regarding enablement is excluded.

Inline's argument, however, on obviousness is completely contrary to clear Federal Circuit law stating that secondary considerations are a means for a *patentee* (i.e., Inline) to *rebut* a prima facie showing of obviousness by a defendant.¹⁹ Further, the case law cited by Inline does not examine

the issue of secondary considerations with regard to expert opinions on obviousness. Rather, the case law cited by Inline shows that the trial court as the *fact finder* is obligated to consider evidence of nonobviousness when reaching its conclusion on obviousness.²⁰ A defendant does not bear the burden of showing the absence of such factors. Moreover, as evidenced by the cases cited by the defendants, those factors need not be considered at all if they are not relevant. Inline's assertion that the Federal Circuit has identified 10 factors that an expert must consider is misplaced. Whether Waring adequately addressed or failed to address relevant secondary considerations goes to weight, not reliability under FRE 702.

Inline's argument regarding the application of FRCP 26(a)(2)(B) as an element of an expert's qualification misinterprets and misapplies the rule. As noted in the *Advisory Committee Notes*,²¹ the goal of the 1993 changes was to have the expert reports set forth the “substance of *direct* examination,” written so that the reports “reflect the testimony to be given by the witness.” Nothing in Rule 26 suggests that expert testimony be excluded based on the reliability of the conclusions of the expert.

As a result, Inline's motion to exclude Waring's opinion of obviousness is denied. Inline's motion to exclude Waring's opinion of enablement is granted.

Footnotes

- 1 Inline initially sued AOL and Earthlink. Since the original filing of the complaints, other plaintiffs have been added because of their contractual relationships with Inline. For ease of reference, all plaintiffs shall be referred to as Inline.
- 2 Inline's U.S. Patent No. 6,542,585 (“the '585 patent”) was subsequently added to the litigation after it was issued in 2003. The 718 patent is no longer at issue in the litigation.
- 3 Inline's second motion is directed at Waring's October 20, 2006 Supplemental Expert Report (the “Supplemental Report”), which plaintiffs argue should be excluded as untimely. The Supplemental Report was the subject of the court's January 8, 2007 memorandum opinion, D.I. 593.
- 4 D.I. 524 (Motion to Exclude Certain Testimony Waring's Expert Report).
- 5 315 F.3d 1335, 1431 (Fed.Cir.2003).
- 6 See *DyStar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co.*, 464 F.3d 1356, 1360 (Fed.Cir.2006) (citing *Graham v. John Deere Co.*, 383 U.S. 1, 17, 86 S.Ct. 684, 15 L.Ed.2d 545 (1996)) (determination of obviousness depends upon, among other things *relevant* secondary considerations, including commercial success, long felt but unsolved needs, and failure of others).
- 7 *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1538 (Fed.Cir.1983) (emphasis added).
- 8 See, e.g., *In re TMI Litigation*, 193 F.3d 613, 669 (3d Cir.1993).
- 9 *Paoli*, 35 F.3d at 791–92 (quoting *Meyers v. Pennypack Woods Home Ownership Ass'n*, 559 F.2d 894, 905 (3d Cir.1977)).
- 10 *Paoli*, 35 F.3d at 791.
- 11 *Konstantopoulos v. Westvaco Corp.*, 112 F.3d 710, 719 (3d Cir.1997) (quoting *Meyers v. Pennypack Woods Home Ownership Ass'n*, 559 F.2d 894, 904 (3d cir.1977)).
- 12 *Plant Genetic*, 315 F.3d at 1338.

- 13 *Id.* at 1338, 1341.
- 14 *Id.*
- 15 See *Neutrino Dev. Corp. v. Sonosite, Inc.*, 410 F.Supp.2d 529, 542 (S.D.Tex.2006).
- 16 See *N. Telecom, Inc. v. Datapoint Corp.*, 908 F.2d 931 (Fed.Cir.1990).
- 17 See *SuperGuide Crop. v. DirecTV Enters., Inc.*, 358 F.3d 870, 880 (Fed.Cir.2004) (to satisfy enablement, the specification need not describe every conceivable embodiment, and the claimed invention need not be perfect in operation).
- 18 See *In re Paoli R.R. Yard PCB Litig.*, 35 F.3d 717, 746 (3d Cir.1994).
- 19 See *Alza Corp. v. Mylan Labs., Inc.*, 464 F.3d 1286, 1293 (Fed.Cir.2006) (secondary considerations are available for a *patentee* to use in rebutting a *prima facie* case of obviousness.; *Syntex (U.S.A.) LLC v. Apotex, Inc.*, 407 F.3d 1371, 1383 (Fed.Cir.2005) (“[T]he secondary consideration[s] ... exist[] largely to provide a *means for patentees* to show in close cases that subject matter that appears obvious is in law unobvious”) (emphasis added).
- 20 See *Ruiz v. AB Chance Co.*, 234 F.3d 654, 667 (Fed.Cir.2000) (holding that the district court erred in failing to consider or discuss evidence of secondary considerations; citing precedent that where secondary considerations are present, they must be considered); *Ashland Oil Inc. v. Delta Resins and Refractories Inc.*, 776 F.2d 281, 306 (Fed.Cir.1985) (finding that it was legal error for a district court to fail to consider relevant evidence of secondary considerations); cf. *Brown & Williamson v. Philip Morris*, 229 F.3d 1120, 1131 (Fed.Cir.2000) (where the failure of the district court to cite to secondary considerations alone is not reversible error; thus, although the court did not consider certain objective evidence of nonobviousness, such error was harmless because the patentee could not overcome strong evidence of nonobviousness); *Simmons Fastener Corp. v. Illinois Tool Works, Inc.*, 739 F.2d 1573, 1575 (Fed.Cir.1984) (“Trial court’s error lies in its exclusion of such evidence in arriving at a conclusion on the obviousness of the claimed invention.”).
- 21 FRCP 26(a)(2)(B) *Advisory Committee Notes*, 1993.