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Applicant: Gary Alan KEMP II, et al.  
Title: CLICK BASED TRADING WITH INTUITIVE GRID DISPLAY OF MARKET DEPTH  
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Sir:

Transmitted herewith for filing under 37 C.F.R. § 1.53(b) is the nonprovisional utility patent application of:

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Enclosed are:

- [ X ] Specification, Claim(s), and Abstract (30 pages).
- [ X ] Informal drawings (6 sheets, Figures 1-6).
- [ X ] Unsigned Declaration and Power of Attorney (4 pages).
- [ ] Information Disclosure Statement.
- [ ] Form PTO-1449 with copies of \_\_\_ listed reference(s).

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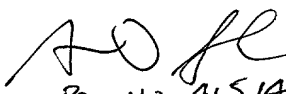
The filing fee is calculated below:

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Basic Fee						\$690.00		\$690.00
Total Claims:	40	20	=	20	x	\$18.00	=	\$360.00
Independents:	6	3	=	3	x	\$78.00	=	\$234.00
If any Multiple Dependent Claim(s) present:					+	\$260.00	=	\$0.00
						SUBTOTAL:	=	\$1284.00
[ X ]						Small Entity Fees Apply (subtract 1/2 of above):	=	\$642.00
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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.

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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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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

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

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

Figure 3 illustrates the Mercury display of the present invention;

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

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

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

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### 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.

5 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 Figure 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 Figure 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.

30 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.

5           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  
10 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  
15 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.

          Figure 2 illustrates a screen display of an invention described in a  
20 commonly owned co-pending application entitled "Click Based Trading with Market Depth Display" serial no. \_\_\_\_\_, filed on \_\_\_\_\_, 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  
25 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  
30 202 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.

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In the screen display shown in Figure 2, the commodity (contract) being traded is represented in row 1 by the character string "CDH0". The Depth column 208 will inform the trader of a status by displaying different colors. 5 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)*: 10 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.

15 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 20 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 25 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 30 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.

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**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	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		

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 Figure 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 Figure 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 Figure 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 Figure 3.

5 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  
10 (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  
15 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  
20 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  
25 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 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  
30 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.

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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 chose 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, Figure 4 shows a screen displaying the same market as that of Figure 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 Figures 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 Figures 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







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  
5 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  
10 flowchart of Figure 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  
15 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  
20 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.

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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  
30 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.



centering said prices corresponding to the bids and asks about an inside market price upon receipt of a re-centering instruction.

7. A method of displaying, on an electronic display device, the market depth of a commodity traded in a market according to claim 1, further comprising dynamically displaying entered and working orders in alignment with the prices corresponding thereto.

8. A computer readable medium having program code recorded thereon for execution on a computer for displaying the market depth of a commodity traded in a market, comprising:

a first program code for dynamically displaying a plurality of bids in the market for said commodity;

a second program code for dynamically displaying of a plurality of asks in the market for said commodity; and

a third program code for statically displaying prices corresponding to said plurality of bids and asks;

wherein said pluralities of bids and asks are dynamically displayed in alignment with the prices corresponding thereto.

9. A computer readable medium having program code recorded thereon for execution on a computer for displaying the market depth of a commodity traded in a market according to claim 8, further comprising program code to ensure that said displayed bids, asks and prices are oriented vertically.

10. A computer readable medium having program code recorded thereon for execution on a computer for displaying the market depth of a commodity traded in a market according to claim 8, further comprising program code to ensure that said displayed bids, asks and prices are oriented horizontally.



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11. A computer readable medium having program code recorded thereon for execution on a computer for displaying the market depth of a commodity traded in a market 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.

12. A computer readable medium having program code recorded thereon for execution on a computer for displaying the market depth of a commodity traded in a market according to claim 8, further comprising program code to ensure that bids and asks are displayed in different colors.

13. A computer readable medium having program code recorded thereon for execution on a computer for displaying the market depth of a commodity traded in a market 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.

14. A computer readable medium having program code recorded thereon for execution on a computer for displaying the market depth of a commodity traded in a market according to claim 8, further comprising program code for dynamically displaying entered and working orders in alignment with the prices corresponding thereto.

15. A graphical user interface for displaying the market depth of a commodity traded in a market, comprising:

a dynamic display of a plurality of bids in the market for said commodity;

a dynamic display of a plurality of asks in the market for said commodity; and

a static display of prices corresponding to said plurality of bids and asks;

wherein said pluralities of bids and asks are dynamically displayed in alignment with the prices corresponding thereto.

16. A graphical user interface according to claim 15, wherein said displays are oriented vertically.

17. A graphical user interface according to claim 15, wherein said displays are oriented horizontally.

18. A graphical user interface according to claim 15, wherein said displays of the pluralities of bids and asks in the market include bid and ask quantities of the commodity.

19. A graphical user interface according to claim 15, wherein said displays are displayed in different colors.

20. A graphical user interface according to claim 15, 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.

21. A graphical user interface according to claim 15, further comprising a display of entered and working orders displayed in alignment with the prices corresponding thereto.

22. A method of placing a trade order for a commodity on an electronic exchange, using a graphical user interface and a user input device and having preset parameters for trade orders, said method comprising:

displaying the market depth of a commodity traded in a market, 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; and

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initiating placement of a trade order of the commodity through a single action of the user input device initiating placement of a trade order of the commodity through a single action of the user input device with a pointer of the user input device positioned over an area in said dynamic displays of bids and asks;

wherein the contents of the trade order are based in part upon the preset parameters and the position of the pointer at the time of said single action.

23. A method of placing a trade order according to claim 22, wherein said trade order is a buy order if the position of the pointer at the time of said single action is within the display of bids and wherein said trade order is a sell order if the position of the pointer at the time of said single action is within the display of asks.

24. A method of placing a trade order according to claim 23, 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.

25. A method of placing a trade order according to claim 23, 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.

26. A method of placing a trade order according to claim 23, 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.

27. A method of placing a trade order according to claim 26, wherein said offset is equal to a first pre-determined value if a single action of a



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30, 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.

32. A computer readable medium having program code recorded thereon, for execution on a computer to place a trade order according to claim 30, 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.

33. A computer readable medium having program code recorded thereon, for execution on a computer to place a trade order according to claim 30, 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.

34. A computer readable medium having program code recorded thereon, for execution on a computer to place a trade order according to claim 33, 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.

35. A client system for placing a trade order for a commodity on an electronic exchange, the system comprising:

a display device for displaying the market depth of a commodity traded in a market, 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;









# Connection to multiple exchanges

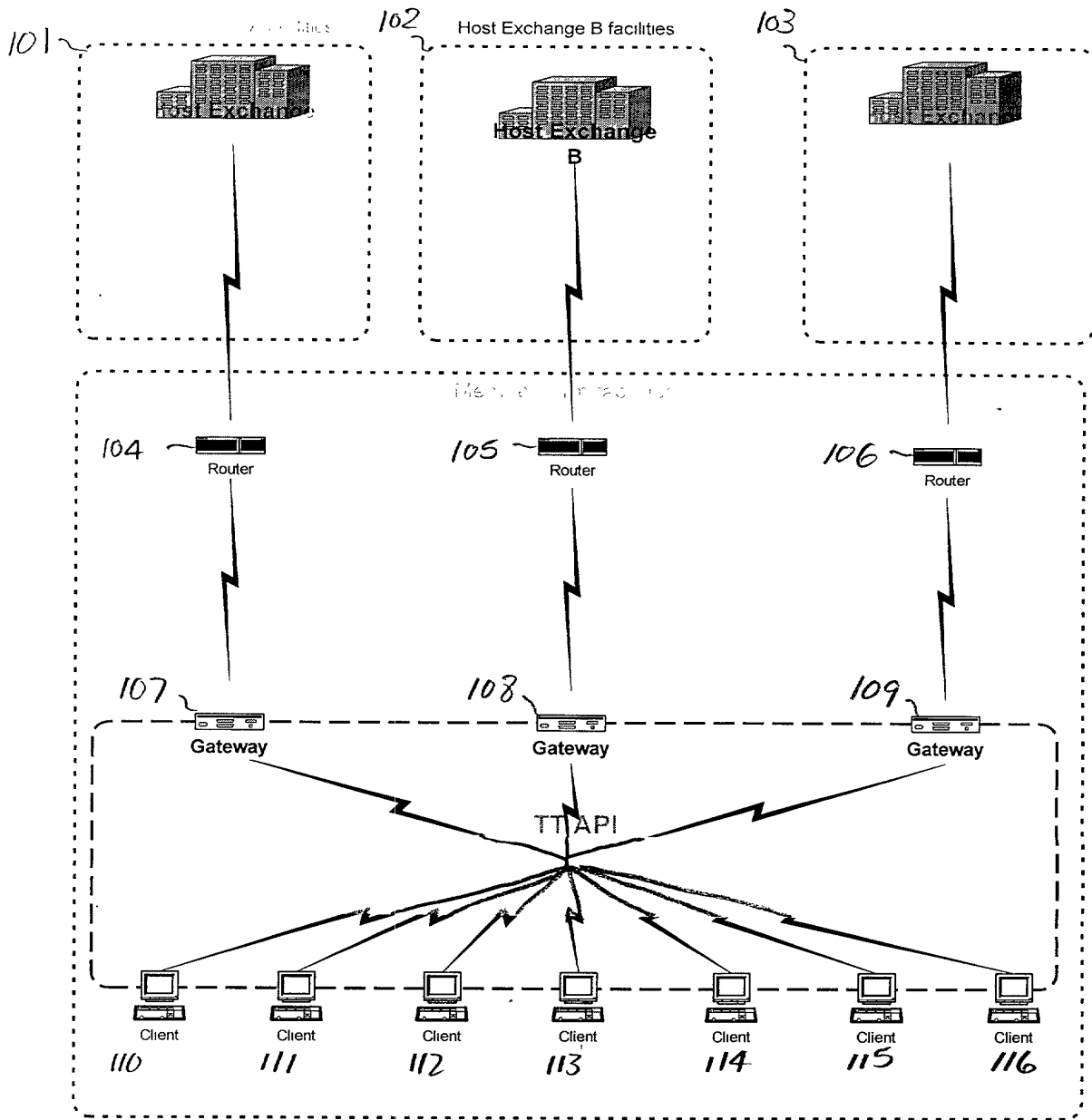


FIGURE 1

	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			

FIGURE 2

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

FIGURE 3

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EW		10:48:44	BidQ	AskQ	Pr	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
	1K   5H					
	CLR	43			92	
X	10	125			91	
	17	97			90	
	CXL	18			89	
	+   -	97			88	
	NET 0	30			87	
		43			86	
	NET REAL	110			85	
		23			84	
		31			83	
		125			82	
		21			81	

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FIGURE 4

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SYCOM FGBL DEC99					
EWV	10:48:44	BidQ	AskQ	Prc	LTO
1206	L 3		0	99	
	R 5		24	98	
1205	720		33	97	
	X 10		115	96	
	0		32	95	
	10 1H		27	94	
	50 3H		63	93	
	1K 5H		46	92	
	CLR		28	91	
	X 10		20	90	10
1204	17				
	CXL	18		89	
	+ -	97		88	
	NET 0	30		87	
	NET REAL	43		86	
		110		85	
		23		84	
		31		83	
		125		82	
		21		81	

1208
1201
1202
1203
1207

FIGURE 5



**DECLARATION AND POWER OF ATTORNEY**

As a below named inventor, I HEREBY DECLARE:

THAT my residence, post office address, and citizenship are as stated below next to my name;

THAT I believe I am the original, first, and sole inventor (if only one inventor is named below) or an original, first, and joint inventor (if plural inventors are named below or in an attached Declaration) of the subject matter which is claimed and for which a patent is sought on the invention entitled

CLICK BASED TRADING WITH INTUITIVE GRID DISPLAY OF MARKET DEPTH

(Attorney Docket No. 024051/0135)

the specification of which (check one)

     is attached hereto.

  X   was filed on June 9, 2000 as United States Application Number or PCT International Application Number            and was amended on          (if applicable).

THAT I do not know and do not believe that the same invention was ever known or used by others in the United States of America, or was patented or described in any printed publication in any country, before I (we) invented it;

THAT I do not know and do not believe that the same invention was patented or described in any printed publication in any country, or in public use or on sale in the United States of America, for more than one year prior to the filing date of this United States application;

THAT I do not know and do not believe that the same invention was first patented or made the subject of an inventor's certificate that issued in any country foreign to the United States of America before the filing date of this United States application if the foreign application was filed by me (us), or by my (our) legal representatives or assigns, more than twelve months (six months for design patents) prior to the filing date of this United States application;

THAT I have reviewed and understand the contents of the above-identified specification, including the claim(s), as amended by any amendment specifically referred to above;

THAT I believe that the above-identified specification contains a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention, and sets forth the best mode contemplated by me of carrying out the invention; and

THAT I acknowledge the duty to disclose to the U.S. Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, §1.56.

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I UNDERSTAND AND AGREE THAT the foregoing attorneys and agents appointed by me to prosecute this application do not personally represent me or my legal interests, but instead represent the interests of the legal owner(s) of the invention described in this application.

I FURTHER 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 or any patent issuing thereon.

Name of first inventor	Gary Allan Kemp II
Residence	Winnetka, IL
Citizenship	
Post Office Address	
Inventor's signature	
Date	

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

**Applicant:** Gary Alan KEMP II, et al.

**Title:** CLICK BASED TRADING WITH INTUITIVE GRID DISPLAY OF MARKET DEPTH

**Appl. No.:** Unknown

**Filing Date:** June 9, 2000

**Examiner:** Unknown

**Art Unit:** Unknown

**UTILITY PATENT APPLICATION**  
**TRANSMITTAL**

Assistant Commissioner for Patents  
Box PATENT APPLICATION  
Washington, D.C. 20231

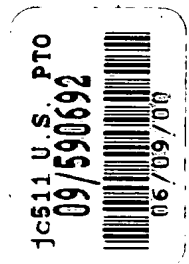
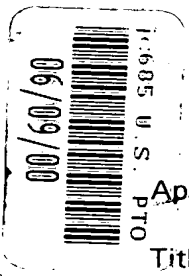
Sir:

Transmitted herewith for filing under 37 C.F.R. § 1.53(b) is the nonprovisional utility patent application of:

Gary Allan Kemp II  
Jens-Uwe Schluetter  
Harris Brumfield

Enclosed are:

- [ X ] Specification, Claim(s), and Abstract (30 pages).
- [ X ] Informal drawings (6 sheets, Figures 1-6).
- [ X ] Unsigned Declaration and Power of Attorney (4 pages).
- [ ] Information Disclosure Statement.
- [ ] Form PTO-1449 with copies of \_\_\_ listed reference(s).



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The filing fee is calculated below:

	Claims as Filed	Included in Basic Fee	Extra Claims	Rate	Fee Totals
Basic Fee				\$690.00	\$690.00
Total Claims:	40	- 20	= 20	x \$18.00	= \$360.00
Independents:	6	- 3	= 3	x \$78.00	= \$234.00
If any Multiple Dependent Claim(s) present:				+ \$260.00	= \$0.00
				SUBTOTAL:	= \$1284.00
[ X ]	Small Entity Fees Apply (subtract 1/2 of above):				= \$642.00
	TOTAL FILING FEE:				= \$642.00

- [ ] A check in the amount of \$642.00 to cover the filing fee is enclosed.
- [ X ] The required filing fees are not enclosed but will be submitted in response to the Notice to File Missing Parts of Application.
- [ ] The Assistant Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Assistant Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741.

Please direct all correspondence to the undersigned attorney or agent at the address indicated below.

Respectfully submitted,

*W T Ellis*  
Reg No 41514

Date June 9, 2000

By \_\_\_\_\_

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Connection to multiple exchanges

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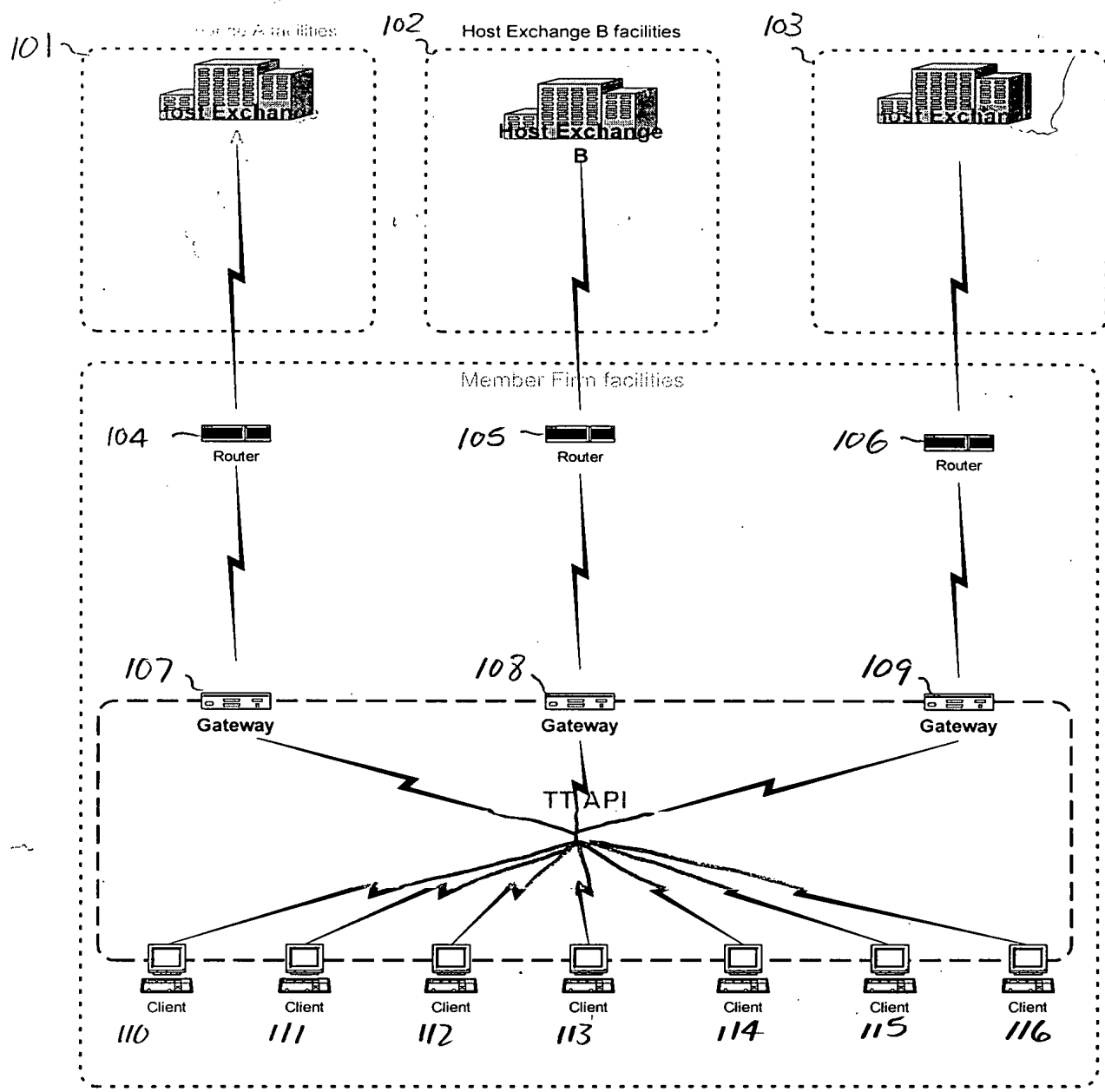


FIGURE 1

201 202 203 204 205

	Contract	Depth	BidQty	BidPrc	AskPrc	AskQty	LastPrc	LastQty	Total
1	GDH0		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			

FIGURE 2

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

1001      1002      1003      1004      1005      1006

FIGURE 3

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SYCOM FGBL DEC99					
EW	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				
	CLR	43		92	
	X 10	125		91	
	17	97		90	
	CXL	18		89	
B O W 15	+ -	97		88	
B O W 15	NET 0	30		87	
		43		86	
B O W 17	NET REAL	110		85	
		23		84	
		31		83	
		125		82	
		21		81	

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FIGURE 4



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1206  
1205  
1204

SYCOM FGBL DEC99		BidQ	AskQ	Prc	LTO
EW	10:48:44				
	L 3		100	99	
	R 5		74	98	
	720		53	97	
	X 10		116	96	
	0		32	96	
	10 1H		27	94	
	60 3H		63	93	
S O W 20	1K 6H		45	92	
S O W 7	CLR		23	91	
	X 10		20	90	10
	17				
S O W 15	CXL	18		89	
S O W 19	+ -	97		88	
	NET 0	30		87	
S O W 17	NET REAL	43		86	
		110		85	
		23		84	
		31		83	
		125		82	
		21		81	

1208 1201 1202 1203 1207

FIGURE 5

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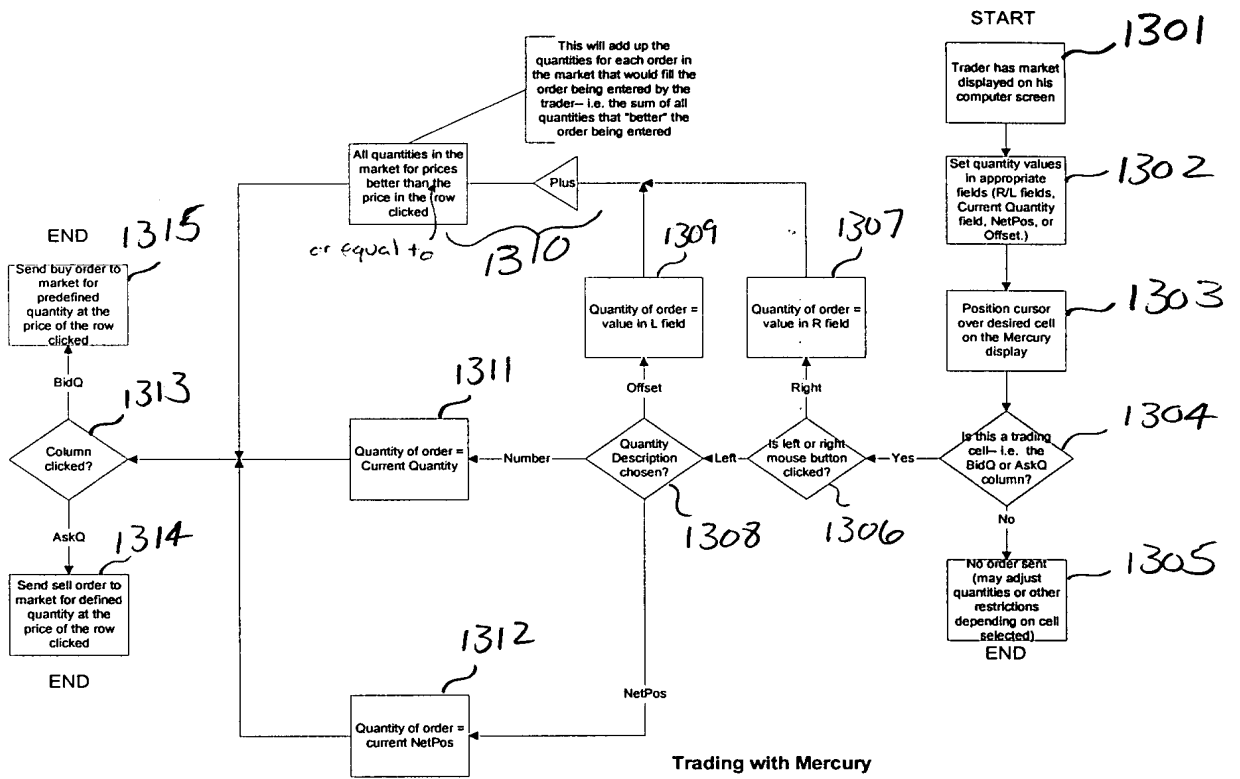


FIGURE 6

CLICK BASED TRADING WITH INTUITIVE  
GRID DISPLAY OF MARKET DEPTH

Priority

5 The present application claims priority to a U.S. Provisional Patent  
Application <sup>NO. 65/186,322</sup> entitled "Market Depth Display Click Based Trading and Mercury  
Display" filed March 2, 2000, the contents of which are incorporated herein by  
reference.

Field of Invention

10

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,  
15 where a commodity includes anything that can be traded with quantities and/or  
prices.

Background Of The Invention

20

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  
25 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.

5

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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that the value of time savings in this portion may amount to millions of dollars annually.

5 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  
10 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  
15 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.

20

#### 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  
25 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.

30 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

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

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

Figure 3 illustrates the Mercury display of the present invention;

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

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

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

5

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

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mouse button or other input device, is considered a single action of the user for the purposes of the present invention.

5 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 Figure 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 Figure 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.

20 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

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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.

5 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  
10 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  
15 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.

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*CI*

~~Figure 2 illustrates a screen display of an invention described in a~~  
20 commonly owned co-pending application entitled "Click Based Trading with Market Depth Display" serial no. 09/589,751, filed on June 9, 2002, 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  
25 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  
30 202 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~~

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In the screen display shown in Figure 2, the commodity (contract) being traded is represented in row 1 by the character string "CDH0". The Depth column 208 will inform the trader of a status by displaying different colors. 5 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)*: 10 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.

15 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 20 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 25 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 30 more easily identifiable by the user through the use of the present invention.

10

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.

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**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	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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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 Figure 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 Figure 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 Figure 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 Figure 3.

5 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  
10 (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.

20 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  
25 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  
30 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 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.

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*Handwritten initials and a line pointing to the text above.*

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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 chose 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, Figure 4 shows a screen displaying the same market as that of Figure 3 but at a later interval where the inside market, cells 1101, has risen three ticks. Here, the inside market for the

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commodity is 43 (best bid quantity) at 92 (best bid price) and 63 (best ask quantity) at 93 (best ask price). In comparing Figures 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 Figures 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.

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Any order entered using right mouse button

$$Bo = (Q_a + R)P \text{ (Eq. 1) If BidQ field clicked.}$$

$$So = (Q_b + R)P \text{ (Eq. 2) If AskQ field clicked.}$$

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Orders entered using the left mouse button

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

$$Bo = (Q_a + L)P \text{ (Eq. 3) If BidQ field clicked.}$$

$$So = (Q_b + L)P \text{ (Eq. 4) If AskQ field clicked.}$$

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

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

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

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

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

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

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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.

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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.

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Using the screen display and values from Figure 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.

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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  
10 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  
15 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  
20 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.

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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  
30 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.

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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)).

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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.

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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.

25

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

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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.

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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 Figure 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.

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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,

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centering said prices corresponding to the bids and asks about an inside market price upon receipt of a re-centering instruction.

7. A method of displaying, on an electronic display device, the market depth of a commodity traded in a market according to claim 1, further comprising dynamically displaying entered and working orders in alignment with the prices corresponding thereto.

8. A computer readable medium having program code recorded thereon for execution on a computer for displaying the market depth of a commodity traded in a market, comprising:

a first program code for dynamically displaying a plurality of bids in the market for said commodity;

a second program code for dynamically displaying of a plurality of asks in the market for said commodity; and

a third program code for statically displaying prices corresponding to said plurality of bids and asks;

wherein said pluralities of bids and asks are dynamically displayed in alignment with the prices corresponding thereto.

9. A computer readable medium having program code recorded thereon for execution on a computer for displaying the market depth of a commodity traded in a market according to claim 8, further comprising program code to ensure that said displayed bids, asks and prices are oriented vertically.

10. A computer readable medium having program code recorded thereon for execution on a computer for displaying the market depth of a commodity traded in a market according to claim 8, further comprising program code to ensure that said displayed bids, asks and prices are oriented horizontally.



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11. A computer readable medium having program code recorded thereon for execution on a computer for displaying the market depth of a commodity traded in a market 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.

12. A computer readable medium having program code recorded thereon for execution on a computer for displaying the market depth of a commodity traded in a market according to claim 8, further comprising program code to ensure that bids and asks are displayed in different colors.

13. A computer readable medium having program code recorded thereon for execution on a computer for displaying the market depth of a commodity traded in a market 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.

14. A computer readable medium having program code recorded thereon for execution on a computer for displaying the market depth of a commodity traded in a market according to claim 8, further comprising program code for dynamically displaying entered and working orders in alignment with the prices corresponding thereto.

15. A graphical user interface for displaying the market depth of a commodity traded in a market, comprising:

a dynamic display of a plurality of bids in the market for said commodity;

a dynamic display of a plurality of asks in the market for said commodity; and

a static display of prices corresponding to said plurality of bids and asks;

wherein said pluralities of bids and asks are dynamically displayed in alignment with the prices corresponding thereto.

16. A graphical user interface according to claim 15, wherein said displays are oriented vertically.

17. A graphical user interface according to claim 15, wherein said displays are oriented horizontally.

18. A graphical user interface according to claim 15, wherein said displays of the pluralities of bids and asks in the market include bid and ask quantities of the commodity *a*

19. A graphical user interface according to claim 15, wherein said displays are displayed in different colors.

20. A graphical user interface according to claim 15, 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.

21. A graphical user interface according to claim 15, further comprising a display of entered and working orders displayed in alignment with the prices corresponding thereto.

*Sub a2* 22. A method of placing a trade order for a commodity on an electronic exchange, using a graphical user interface and a user input device and having preset parameters for trade orders, said method comprising:

displaying the market depth of a commodity traded in a market, 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; and

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initiating placement of a trade order of the commodity through a single action of the user input device initiating placement of a trade order of the commodity through a single action of the user input device with a pointer of the user input device positioned over an area in said dynamic displays of bids and asks;

wherein the contents of the trade order are based in part upon the preset parameters and the position of the pointer at the time of said single action.

23. A method of placing a trade order according to claim 22, wherein said trade order is a buy order if the position of the pointer at the time of said single action is within the display of bids and wherein said trade order is a sell order if the position of the pointer at the time of said single action is within the display of asks.

3/24. A method of placing a trade order according to claim 23, 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.

4/25. A method of placing a trade order according to claim 23, 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.

5/26. A method of placing a trade order according to claim 23, 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.

6/27. A method of placing a trade order according to claim 26, wherein said offset is equal to a first pre-determined value if a single action of a

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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.

~~27~~ 28. A method of placing a trade order according to claim ~~22~~, further comprising canceling said trade order in response to a subsequent single action of the user input device.

~~Sub D2~~ 29. A computer readable medium having program code recorded thereon, for execution on a computer having a graphical user interface and a user input device and having preset parameters for trade orders, to place a trade order for a commodity on an electronic exchange, comprising:

a first program code displaying the market depth of a commodity traded in a market, 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;

a second program code for initiating placement of a trade order of the commodity through a single action of the user input device with a pointer of the user input device positioned over an area in said dynamic displays of bids and asks; and

a third program code for setting characteristics of the trade order based in part upon the preset parameters and the position of the pointer at the time of said single action.

~~Sub D3~~ 30. A computer readable medium having program code recorded thereon, for execution on a computer to place a trade order according to claim 29, 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 the display of bids and that said trade order is a sell order if the position of the pointer at the time of said single action is within the display of asks.

10 31. A computer readable medium having program code recorded thereon, for execution on a computer to place a trade order according to claim

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<sup>9</sup>30, 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.

<sup>11</sup>32. A computer readable medium having program code recorded thereon, for execution on a computer to place a trade order according to claim <sup>9</sup>30, 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.

<sup>12</sup>33. A computer readable medium having program code recorded thereon, for execution on a computer to place a trade order according to claim <sup>9</sup>30, 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.

<sup>13</sup>34. A computer readable medium having program code recorded thereon, for execution on a computer to place a trade order according to claim <sup>12</sup>33, 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.

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<sup>14</sup>35. A client system for placing a trade order for a commodity on an electronic exchange, the system comprising:

a display device for displaying the market depth of a commodity traded in a market, 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;

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a user input device for positioning a pointer thereof over an area in said dynamic displays of bids and asks and for initiating placement of a trade order of the commodity through a single action of the user input device; and

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a trade order characteristics setting component for setting characteristics of the trade order based in part upon preset parameters and the position of the pointer at the time of said single action.

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36. A client system for placing a trade order for a commodity according to claim 35, wherein said trade order characteristics setting 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 the display of bids and that said trade order is a sell order if the position of the pointer at the time of said single action is within the display of asks.

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37. A client system for placing a trade order for a commodity according to claim <sup>105</sup>36, wherein said trade order characteristics setting 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.

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38. A client system for placing a trade order for a commodity according to claim <sup>105</sup>36, wherein said trade order characteristics setting 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.

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39. A client system for placing a trade order for a commodity according to claim <sup>105</sup>36, wherein said trade order characteristics setting component establishes 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.

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<sup>19</sup>/<sub>40</sub>. A client system for placing a trade order for a commodity according to claim <sup>18</sup>/<sub>39</sub>, wherein said trade order characteristics setting 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 pre-determined value if a single action of a second type is taken.

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Abstract of the Invention

5 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  
10 quickly and efficiently.

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**DECLARATION AND POWER OF ATTORNEY**

As a below named inventor, I HEREBY DECLARE:

THAT my residence, post office address, and citizenship are as stated below next to my name;

THAT I believe I am the original, first, and sole inventor (if only one inventor is named below) or an original, first, and joint inventor (if plural inventors are named below or in an attached Declaration) of the subject matter which is claimed and for which a patent is sought on the invention entitled

CLICK BASED TRADING WITH INTUITIVE GRID DISPLAY OF MARKET DEPTH

(Attorney Docket No. 024051/0135)

the specification of which (check one)

     is attached hereto.

  X   was filed on June 9, 2000 as United States Application Number or PCT International Application Number            and was amended on            (if applicable).

THAT I do not know and do not believe that the same invention was ever known or used by others in the United States of America, or was patented or described in any printed publication in any country, before I (we) invented it;

THAT I do not know and do not believe that the same invention was patented or described in any printed publication in any country, or in public use or on sale in the United States of America, for more than one year prior to the filing date of this United States application;

THAT I do not know and do not believe that the same invention was first patented or made the subject of an inventor's certificate that issued in any country foreign to the United States of America before the filing date of this United States application if the foreign application was filed by me (us), or by my (our) legal representatives or assigns, more than twelve months (six months for design patents) prior to the filing date of this United States application;

THAT I have reviewed and understand the contents of the above-identified specification, including the claim(s), as amended by any amendment specifically referred to above;

THAT I believe that the above-identified specification contains a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention, and sets forth the best mode contemplated by me of carrying out the invention; and

THAT I acknowledge the duty to disclose to the U.S. Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, §1.56.

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I HEREBY CLAIM foreign priority benefits under Title 35, United States Code § 119(a)-(d) or § 365(b) of any foreign application(s) for patent or inventor's certificate, or § 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below any foreign application for patent or inventor's certificate or of any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number	Country	Foreign Filing Date	Priority Claimed?	Certified Copy Attached?

I HEREBY CLAIM the benefit under Title 35, United States Code § 119(e) of any United States provisional application(s) listed below.

U.S. Provisional Application Number	Filing Date
60/186,322	March 2, 2000

I HEREBY CLAIM the benefit under Title 35, United States Code, § 120 of any United States application(s), or § 365(c) of any PCT international application designating the United States of America, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application.

U.S. Parent Application Number	PCT Parent Application Number	Parent Filing Date	Parent Patent Number

I HEREBY APPOINT the following registered attorneys and agents of the law firm of FOLEY & LARDNER to have full power to prosecute this application and any continuations, divisions, reissues, and reexaminations thereof, to receive the patent, and to transact all business in the United States Patent and Trademark Office connected therewith:

STEPHEN A. BENT	Reg. No. 29,768
DAVID A. BLUMENTHAL	Reg. No. 26,257
BETH A. BURROUS	Reg. No. 35,087
ALAN I. CANTOR	Reg. No. 28,163
WILLIAM T. ELLIS	Reg. No. 26,874
JOHN J. FELDHAUS	Reg. No. 28,822
PATRICIA D. GRANADOS	Reg. No. 33,683

002.349521







UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENTS  
 UNITED STATES PATENT AND TRADEMARK OFFICE  
 WASHINGTON, D.C. 20231  
 www.uspto.gov



Bib Data Sheet

<b>SERIAL NUMBER</b> 09/590,692	<b>FILING DATE</b> 06/09/2000 <b>RULE</b> -	<b>CLASS</b> 705	<b>GROUP ART UNIT</b> 2161	<b>ATTORNEY DOCKET NO.</b> 024051/0135
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**APPLICANTS**  
 Gary Allan Kemp II, Winnetka, IL ;  
 Jens-Uwe Schluetter, Evanston, IL ;  
 Harris Brumfield, Chicago, IL ;

**\*\* CONTINUING DATA \*\*\*\*\***  
 THIS APPLN CLAIMS BENEFIT OF 60/186,322 03/02/2000

**\*\* FOREIGN APPLICATIONS \*\*\*\*\***

**IF REQUIRED, FOREIGN FILING LICENSE**      **\*\* SMALL ENTITY \*\***  
**GRANTED \*\* 08/03/2000**

Foreign Priority claimed <input type="checkbox"/> yes <input checked="" type="checkbox"/> no	STATE OR COUNTRY IL	SHEETS DRAWING 6	TOTAL CLAIMS 40	INDEPENDENT CLAIMS 6
35 USC 119 (a-d) conditions met <input type="checkbox"/> yes <input checked="" type="checkbox"/> no <input type="checkbox"/> Met after Allowance				
Verified and Acknowledged Examiner's Signature _____ Initials _____				

**ADDRESS**

William T Ellis  
 Foley & Lardner  
~~Washington, DC~~  
 Suite 500 3000 K Street NW  
 Washington, DC 20007-5109

**TITLE**

Click based trading with intuitive grid display of market depth

<b>FILING FEE RECEIVED</b> 720	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

PATENT APPLICATION SERIAL NO. 09590692

U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE  
FEE RECORD SHEET

03/24/2000 MGORDON 0000069 09527209

01 FC:101

690.00 OP

**PATENT APPLICATION FEE DETERMINATION RECORD**

Effective December 29, 1999

Application or Docket Number

*27590692*

**CLAIMS AS FILED - PART I**

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA
BASIC FEE		
TOTAL CLAIMS	<i>40</i> minus 20 = *	<i>20</i>
INDEPENDENT CLAIMS	<i>6</i> minus 3 = *	<i>3</i>
MULTIPLE DEPENDENT CLAIM PRESENT		

\* If the difference in column 1 is less than zero, enter "0" in column 2

**CLAIMS AS AMENDED - PART II**

*A*

AMENDMENT A	(Column 1) CLAIMS REMAINING AFTER AMENDMENT	(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA
Total	* <i>46</i>	Minus ** <i>40</i>	= <i>26</i>
Independent	* <i>6</i>	Minus *** <i>3</i>	= <i>3</i>
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM			

*B*

AMENDMENT B	(Column 1) CLAIMS REMAINING AFTER AMENDMENT	(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA
Total	* <i>46</i>	Minus ** <i>46</i>	= <i>0</i>
Independent	* <i>3</i>	Minus *** <i>6</i>	= <i>0</i>
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM			

AMENDMENT C	(Column 1) CLAIMS REMAINING AFTER AMENDMENT	(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA
Total	*	Minus **	=
Independent	*	Minus ***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM			

\* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.  
 \*\* If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20."  
 \*\*\* If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3."  
 The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

SMALL ENTITY TYPE  OR

OTHER THAN SMALL ENTITY

RATE	FEE	OR	RATE	FEE
	345.00			690.00
X\$ 9=	<i>180.00</i>		X\$18=	
X39=	<i>117.00</i>		X78=	
+130=			+260=	
TOTAL	<i>642.00</i>		TOTAL	

SMALL ENTITY OR

OTHER THAN SMALL ENTITY

RATE	ADDITIONAL FEE	OR	RATE	ADDITIONAL FEE
<i>Rate</i>	<i>243</i>		X\$18=	
X\$ 9=	<i>243</i>		X78=	
X39=	<i>243</i>		+260=	
+130=			TOTAL	
TOTAL	<i>243</i>		TOTAL	

RATE	ADDITIONAL FEE	OR	RATE	ADDITIONAL FEE
X\$ 9=			X\$18=	
X39=			X78=	
+130=			+260=	
TOTAL			TOTAL	

RATE	ADDITIONAL FEE	OR	RATE	ADDITIONAL FEE
X\$ 9=			X\$18=	
X39=			X78=	
+130=			+260=	
TOTAL			TOTAL	

**RAM** Fee History  
Query  
Revenue Accounting and Management

Name/Number: 09590692

Total Records Found: 28

Start Date: Any Date

End Date: Any Date

Accounting Date	Sequence Num.	Tran Type	Fee Code	Fee Amount	Mailroom Date	Payment Method
08/23/2000	00000015	<u>1</u>	<u>122</u>	\$130.00	08/21/2000	CK
10/04/2000	00000082	<u>1</u>	<u>201</u>	\$345.00	06/09/2000	CK
10/04/2000	00000084	<u>1</u>	<u>202</u>	\$117.00	06/09/2000	CK
10/04/2000	00000083	<u>1</u>	<u>203</u>	\$180.00	06/09/2000	CK
10/04/2000	00000086	<u>1</u>	<u>299</u>	\$13.00	06/09/2000	CK
10/04/2000	00000085	<u>1</u>	<u>205</u>	\$65.00	06/09/2000	CK
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10/12/2000	00000182	<u>1</u>	<u>201</u>	-\$345.00	06/09/2000	OP
10/12/2000	00000190	<u>1</u>	<u>202</u>	\$120.00	10/02/2000	CK
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10/12/2000	00000186	<u>1</u>	<u>299</u>	-\$13.00	06/09/2000	OP
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10/31/2000	00000137	<u>1</u>	<u>581</u>	\$40.00	10/02/2000	CK
10/10/2001	00000069	<u>1</u>	<u>103</u>	\$486.00	10/09/2001	CK
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10/18/2001	00000074	<u>1</u>	<u>126</u>	\$180.00	10/17/2001	CK
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12/17/2001	00000018	<u>1</u>	<u>215</u>	\$55.00	10/09/2001	CK
12/17/2001	00000017	<u>1</u>	<u>115</u>	-\$110.00	10/09/2001	OP
03/15/2002	00000122	<u>1</u>	<u>126</u>	\$180.00	03/12/2002	CK
08/14/2002	00000200	<u>1</u>	<u>242</u>	\$640.00	08/12/2002	CK
11/13/2002	00000007	<u>1</u>	<u>1460</u>	\$130.00	11/12/2002	CK
11/13/2002	00000008	<u>1</u>	<u>2801</u>	\$370.00	11/12/2002	CK



## SCORE Placeholder Sheet for IFW Content

Application Number: **09590692**

Document Date: **06/09/2000**

The presence of this form in the IFW record indicates that the following document type was received in paper and is scanned and stored in the SCORE database.

- Drawings

Images of the original documents are scanned in gray scale or color and stored in SCORE. Bi-tonal images are also stored in IFW. Defects visible in both IFW and SCORE are indicative of defects in the original paper documents.

To access the documents in the SCORE database, refer to instructions developed by SIRA.

At the time of document entry (noted above):

- Examiners may access SCORE content via the eDAN interface.
- Other USPTO employees can bookmark the current SCORE URL (<http://es/ScoreAccessWeb/>).
- External customers may access SCORE content via the Public and Private PAIR interfaces.

Form Revision Date: December 8, 2006

Class  
Subclass  
ISSUE CLASSIFICATION

PATENT NUMBER  
6772132

U.S. PATENT APPLICATION

JC-2  
JC-863

O.I.P.E. 2  
PATENT DATE AUG 03 2004  
SCANNED 55 G.A. CS 2

APPLICATION NO. 09/590692	CONT/PRIOR D	CLASS 705	SUBCLASS 37	ART UNIT 2181	EXAMINER W. Weisberger
------------------------------	-----------------	--------------	----------------	------------------	---------------------------

**Certificate**  
AUG 02 2005

APPLICANTS  
Gary Kemp  
Jens-Uwe Schluetter  
Harris Brumfield

TITLE  
Click based trading with intuitive grid display of market depth  
**of Correction**

PTO-2040  
12/99

ORIGINAL		CROSS REFERENCE(S)					
CLASS	SUBCLASS	CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)				
705	37	705	35	36	37	10	14
INTERNATIONAL CLASSIFICATION		345	814				
E-06F	17/60						

Continued on Issue Slip Inside File Jacket

<input type="checkbox"/> <b>TERMINAL DISCLAIMER</b>	<b>DRAWINGS</b>			<b>56 CLAIMS ALLOWED</b>	
	Sheets Drwg. 6	Figs. Drwg. 86	Print Fig. 3	Total Claims 56	Print Claim for O.G. 1
<input type="checkbox"/> The term of this patent subsequent to _____ (date) has been disclaimed.	_____ (Assistant Examiner)			<b>NOTICE OF ALLOWANCE MAILED</b> 2-10-04	
<input type="checkbox"/> The term of this patent shall extend beyond the expiration date of U.S. Patent No. _____	Richard Weisberger A.U. 2181 PRIMARY EXAMINER			<b>ISSUE FEE</b> Amount Due \$25.90 3804	
<input type="checkbox"/> The term of _____ months of this patent have been disclaimed.	_____ (Primary Examiner)			<b>ISSUE BATCH NUMBER</b>	
<b>WARNING:</b> The information disclosed herein may be restricted. Unauthorized disclosure may be prohibited by the United States Code Title 35, Sections 122 and 368. Possession outside the U.S. Patent & Trademark Office is restricted to authorized employees and contractors only.					

Form PTO-135A  
**ISSUED IN FILE**

FILED WITH:  DISK (CRF)  FICHE  CD-ROM  
(Attach \_\_\_\_\_ pocket on right inside flap)

(FACE)

### SEARCHED

Class	Sub.	Date	Exmr.
705	35, 36 37 10 14	~	5/01
705	814	~	5/02
update		~	3/03

### SEARCH NOTES (INCLUDING SEARCH STRATEGY)

	Date	Exmr.
Dialog all sequencer	5/01	~
TRAINING Technologies .com	5/01	~
Euroexchange.com	5/01	~
Wet	5/01	~
Wet update	5/01	~
Dialog Update	5/01	~
Dudy	3/02	~
Wet FCR app 705	1/04	~
PATSY (SM)	1/04	~

### INTERFERENCE SEARCHED

Class	Sub.	Date	Exmr.
705	35 36 37 10 14	~	~

(RIGHT OUTSIDE)

your  
act 2/01

ISSUE SLIP STAPLE AREA (for additional cross references)

EM 2  
8/5/02

POSITION	INITIALS	ID NO.	DATE
PÉE DETERMINATION	AT		
O.I.P.E. CLASSIFIER			
FORMALITY REVIEW	MB	016	12/11/02
RESPONSE FORMALITY REVIEW	MB	016	

INDEX OF CLAIMS

- ✓ ..... Rejected
- ..... Allowed
- (Through numeral)... Canceled
- ..... Restricted

- N ..... Non-elected Interferences
- I ..... Appeal
- A ..... Objected
- O ..... Objected

Claim	Final	Original	Date
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Claim	Final	Original	Date
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If more than 150 claims or 10 actions  
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## FORMALITIES LETTER



\*OC00000005295100\*

UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark OfficeAddress: COMMISSIONER OF PATENT AND TRADEMARKS  
Washington, D.C. 20231

APPLICATION NUMBER	FILING/RECEIPT DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NUMBER
09/590,692	06/09/2000	Gary Allan Kemp II	024051/0135

William T Ellis  
Foley & Lardner  
Washington Harbor  
Suite 500 3000 K Street NW  
Washington, DC 20007-5109

# 2

Date Mailed: 08/03/2000

## NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

**Filing Date Granted**

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given TWO MONTHS from the date of this Notice within which to file all required items and pay any fees required below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The statutory basic filing fee is missing.  
*Applicant must submit \$ 690 to complete the basic filing fee and/or file a small entity statement claiming such status (37 CFR 1.27).*
- Total additional claim fee(s) for this application is \$594.
  - \$360 for 20 total claims over 20.
  - \$234 for 3 independent claims over 3 .
- The oath or declaration is unsigned.
- To avoid abandonment, a late filing fee or oath or declaration surcharge as set forth in 37 CFR 1.16(e) of \$130 for a non-small entity, must be submitted with the missing items identified in this letter.
- **The balance due by applicant is \$ 1414.**

*A copy of this notice **MUST** be returned with the reply.*

*Michael Berkane*

Customer Service Center  
Initial Patent/Examination Division (703) 308-1202

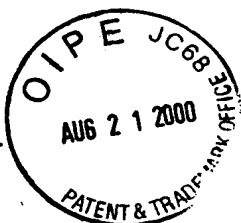
PART 3 - OFFICE COPY

GP 2761\$

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Attorney Docket No. 024051/0135

In re patent application of  
Gary Alan KEMP II, et al.



HS

RECEIVED

AUG 24 2000

Serial No.: 09/590,692

Group Art Unit: 2761

Group 2700

Filed: June 9, 2000

Examiner: Unassigned

For: CLICK BASED TRADING WITH INTUITIVE GRID DISPLAY OF MARKET DEPTH

PETITION TO MAKE SPECIAL UNDER 37 CFR § 1.102(d)

Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

Pursuant to 37 C.F.R. §1.102 and M.P.E.P. 708.02 VIII (SPECIAL EXAMINING PROCEDURE FOR CERTAIN NEW APPLICATIONS—ACCELERATED EXAMINATION), Applicants hereby request that the above-captioned application be granted special status and examined expeditiously. In support of this Petition, Applicants submit the following under lettered headings that correspond with the lettered paragraphs of M.P.E.P. 708.02 VIII.

(A) Petition and Fee Submitted

This Petition is supported by the enclosed check in the amount of \$130, which covers the required petition fee (37 C.F.R. §1.17(i)). Please charge any deficiency or credit any overpayment to our Deposit Account No. 19-0741.

(B) Single Invention Claimed

Applicants believe that all of the claims of the present application are directed to a single invention.

08/23/2000 HCHRISTA 00000013 09590692

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130.00 0P

(C) Pre-Examination Search Made

A pre-examination search was conducted by a professional patent search firm. The search was conducted in the following areas of classification: Class 340, Subclass 825.27, Class 705, Subclasses 35-37. In addition, a key word search was performed on the U.S. Patent and Trademark Office Automated Patent System (APS) computer database.

(D) Copies of References

From the search results, Applicants have identified the references most closely related to the subject matter encompassed by the claims of the present application: U.S. Patent No. 5,077,665 to Silverman et al. ('665 patent), U.S. Patent No. 5,136,501 to Silverman et al. ('501 patent) and U.S. Patent No. 5,963,923 to Garber ('923 patent). Copies of these references have been attached and are discussed herein as mandated by MPEP 708.02. Other references discovered during the search, less relevant than those discussed herein, have been submitted concurrently herewith in an Information Disclosure Statement.

(E) Detailed Discussion of References and Patentability of Claimed Invention

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. The pluralities of bids and asks are dynamically displayed in alignment with the prices corresponding thereto (see, e.g. claims 1, 8 and 15). The present invention, as claimed, is also directed to a method and system for placing trade orders with preset parameters using such displays. Trade orders of the commodity are initiated through a single action of a user input device with a pointer of the user input device positioned over an area in the dynamic displays of bids and asks. The

contents of the trade order are based, in part, upon the preset parameters and the position of the pointer at the time of the single action (see e.g. claims 22, 29 and 35).

By allowing the trader to see the dynamic market depth of a commodity and to trade directly within the market depth of that commodity, the invention provides the trader with improved versatility and efficiency in placing, and thus executing, trade orders for commodities in an electronic exchange. The intuitive grid 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. Furthermore, as described in the specification, 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 money. 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 static price display against which the dynamic displays of bids and asks are aligned assists the trader in this regard.

U.S. Patent No. 5,077,665 to Silverman et al. entitled "Distributed Matching System" and U.S. Patent No. 5,136,501 to Silverman et al. entitled "Anonymous Matching System" have similar disclosures and describe matching systems wherein bids and offers for a given trading instrument are automatically matched to complete trades. Subsets of a system trading book are provided to trading stations (keystations) for controllably masking the available trading market for the given trading instrument. A host computer in the system maintains a host book data base which has all of the active bids and offers in the system. The keystations have their own keystation books which comprise a subset of the host book. For a given trading instrument, the keystation books can comprise accumulated summaries of the bids at



a common price and the offers at a common price. Figure 4 of the references illustrates the central system book (host book) for a given trading instrument. This figure and the corresponding description in columns 7 and 8 of the '665 patent and columns 9 and 10 of the '501 patent appear to disclose that the central system book contains lists of a plurality of bids and offers arranged in order of absolute value along a vertical axis and in time order along a horizontal axis. Figure 5 of the references illustrates a typical keystation book for the same trading instrument. This figure and the corresponding description in columns 8 and 9 of the '665 patent and columns 10 and 11 of the '501 patent appear to disclose that the keystation book contains lists of a plurality of bids and offers in order of absolute value along a vertical axis, similar to the central station book. It also appears to disclose that the number of bids and offers displayed is limited and that the quantities corresponding to the bids and offers for a common price are accumulated instead of being displayed in time order.

The present invention, as claimed, is patentable over the Silverman et al. references. As described above, the present invention includes a dynamic display for a plurality of bids and for a plurality of asks in the market for a given commodity and a static display of prices corresponding to the plurality of bids and asks for the commodity. In the present invention, the *dynamic* nature of the plurality of bids and asks is such that the lists of bids and asks move along the axis of the static price listing (e.g. up and down). The pluralities of bids and asks are thus dynamically displayed in alignment with the prices corresponding thereto.

While it appears that both the central system book and the keystation book of the Silverman et al. references show a plurality of bids and asks for a given traded commodity, in contrast to the present invention, the references disclose that these pluralities are displayed "dynamically" only in the sense that the bids and offers are updated. For example, figure 5 shows the best three bids and offers; presumably

this display is updated as the best bids and offers change. There is no disclosure that the listings of bids and asks actually *move* along any axis.

Furthermore, unlike the present invention, neither the central system book nor the keystation book of the Silverman et al. references includes a static display of prices corresponding to a plurality of bids and asks for a traded commodity. There being no static display of prices, the references also do not disclose that the pluralities of bids and asks are dynamically displayed in alignment with the prices corresponding thereto. As discussed above, there is a distinct importance to having a static display of prices in the present invention. For example, 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 money. Having a static price display against which the dynamic (moving) displays of bids and asks are aligned assists the trader in this regard.

As discussed above, the present invention, as claimed, is also directed to a method and system for placing trade orders with preset parameters using such displays. Trade orders of the commodity are initiated through a single action of a user input device with a pointer of the user input device positioned over an area in the dynamic displays of bids and asks. The contents of the trade order are based in part upon the preset parameters and the position of the pointer at the time of the single action. There is no disclosure or teaching in the Silverman et al. references of such single action trading nor is there any disclosure or teaching of single action trading in the market depth of a commodity using displays representing the keystation book shown in figure 5 or even the central station book shown in figure 4.

In view of the fact that Silverman et al. references fail to disclose or teach various elements of the claimed invention, for at least the reasons set forth above,

Applicants respectfully submit that the Silverman et al. references do not render the claims of the present application unpatentable.

U.S. Patent No. 5,963,923 to Garber ('923 patent), entitled "System and Method for Trading Having a Principal Market Maker," describes a system for trading international currencies. While less relevant to the claims of the present invention than the Silverman et al. references discussed above, this reference is considered herein for its "PMM Inventory Delta Screen" 78 shown in Figure 8. This display has relevance to a Primary Market Maker (PMM) application and allows an inventory position and corresponding risk to be known at all times (see generally, col. 9, lines 15-52). Accordingly, it apparently can be said to show a dynamic representation of inventory and risk.

The Garber reference, however, does not show a dynamic display of a plurality of bids and a plurality of asks in the market for a given commodity. It does not show a static display of prices corresponding to the plurality of bids and asks. It does not show that a pluralities of bids and asks are dynamically displayed in alignment with the prices corresponding thereto. It further does not show a trading method and system for use with such display. These being required claim elements of present invention, Applicants respectfully submit that the claims are patentable over the Garber reference.

Inasmuch as all of the requirements for special status under M.P.E.P. 708.02 VIII have been met, it is respectfully requested that the application be granted special status, and be examined expeditiously.

Respectfully submitted,

August 21, 2000

Date

ADJL

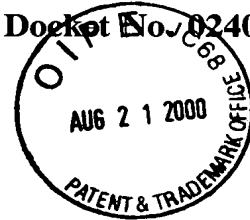
Ankur D. Shah

Registration No. 41,514

FOLEY & LARDNER  
3000 K Street, N.W.  
Suite 500  
Washington, D.C. 20007-5109  
Telephone No.: (202) 672-5300

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Attorney Docket No. 024051/0135



L.W.  
4/1/2  
9.23.02

In re patent application of

Gary Alan KEMP II, et al.

Serial No.: 09/590,692

Group Art Unit: 2761

Filed: June 9, 2000

Examiner: Unassigned

For: **CLICK BASED TRADING WITH INTUITIVE GRID DISPLAY OF MARKET DEPTH**

**INFORMATION DISCLOSURE STATEMENT**  
**UNDER 37 C.F.R. § 1.56**

Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

Submitted herewith on a modified Form PTO-1449 is a listing of documents known to applicants in order to comply with applicants' duty of disclosure pursuant to 37 C.F.R. § 1.56. A copy of each listed document is being submitted to comply with the provisions of 37 C.F.R. §§ 1.97-1.98.

The submission of any document herewith, which is not a statutory bar, is not intended as an admission that such document constitutes prior art against the claims of the present application or that such document is considered material to patentability as defined in 37 C.F.R. § 1.56(b). Applicants do not waive any rights to take any action which would be appropriate to antedate or otherwise remove as a competent reference any document which is determined to be a *prima facie* prior art reference against the claims of the present application.

**TIMING OF THE DISCLOSURE**

The instant Information Disclosure Statement is being filed under 37 C.F.R. §1.97(b), within three months of the filing date.

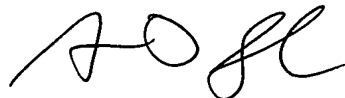
The listed documents were discovered through a search conducted in preparation of a Petition to Make Special, filed concurrently herewith.

Applicant respectfully requests that the listed documents be considered by the Examiner and formally be made of record in the present application and that an initialed copy of Form PTO-1449 be returned in accordance with MPEP §609.

Respectfully submitted,

August 21, 2000

Date



Ankur D. Shah  
Registration No. 41,514

FOLEY & LARDNER  
3000 K Street, N.W.  
Suite 500  
Washington, D.C. 20007-5109  
Telephone No. (202) 672-5300  
Facsimile No. (202) 672-5399

FORMALITIES LETTER



\*OC00000005295100\*



UNITED STATES DEPARTMENT OF COMMERCE Patent and Trademark Office

Address: COMMISSIONER OF PATENT AND TRADEMARKS Washington, D.C. 20231

APPLICATION NUMBER	FILING/RECEIPT DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NUMBER
09/590,692	06/09/2000	Gary Allan Kemp II	024051/0135

William T Ellis  
Foley & Lardner  
Washington Harbor  
Suite 500 3000 K Street NW  
Washington, DC 20007-5109



#3

Date Mailed: 08/03/2000

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

Filing Date Granted

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given TWO MONTHS from the date of this Notice within which to file all required items and pay any fees required below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The statutory basic filing fee is missing. *710.355.00*  
*Applicant must submit \$-690 to complete the basic filing fee and/or file a small entity statement claiming such status (37 CFR 1.27).*
- Total additional claim fee(s) for this application is \$594.  
*180* ■ \$360 for 20 total claims over 20.  
*240* ■ \$234 for 3 independent claims over 3.
- The oath or declaration is unsigned.
- To avoid abandonment, a late filing fee or oath or declaration surcharge as set forth in 37 CFR 1.16(e) of *65.00* \$130 for a non-small entity, must be submitted with the missing items identified in this letter.
- The balance due by applicant is \$ 1414. *720.00*

A copy of this notice MUST be returned with the reply.

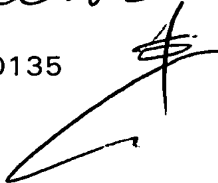
*Milan Barkane*

Customer Service Center  
Initial Patent Examination Division (703) 308-1202

10/04/2000 STEFFERA 00000033 09590692 PART 2 - COPY TO BE RETURNED WITH RESPONSE

01 FC:201	-345.00 DP	<del>00/04/2000 STEFFERA 00000033 09590692</del>	01 FC:201	-345.00 DP
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03 FC:202  
04 FC:205  
05 FC:299

*Sector*  


**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Gary Alan KEMP II, et al.

Title: CLICK BASED TRADING WITH  
INTUITIVE GRID DISPLAY OF  
MARKET DEPTH

Appl. No.: 09/590,692

Filing Date: 6/09/2000

Examiner: Unassigned

Art Unit: 2761



**TRANSMITTAL OF MISSING PARTS  
OF PATENT APPLICATION**

Commissioner for Patents  
Washington, D.C. 20231

Attn: BOX MISSING PARTS

Sir:

In response to the Notice to File Missing Parts of Application mailed on August 3, 2000, in the above-identified application, transmitted herewith are the missing parts needed to complete the filing of the subject patent application.

Enclosed are:

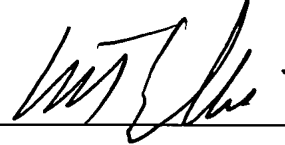
- Declaration and Power of Attorney (4 pages)
- Small Entity Declaration (1 page)
- Copy of Notice to File Missing Parts (Part 2 of Form PTO-1533)
- Check in the amount of \$720.00 in payment of the \$355.00 official Government filing fee, including \$65.00 surcharge, \$180.00 fee for twenty (20) additional dependent claims and \$120.00 fee for three (3) additional independent claims.



The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741.

Respectfully submitted,

By



William T. Ellis  
Attorney for Applicant  
Registration No. 26,874

Date: October 2, 2000

FOLEY & LARDNER  
Washington Harbour  
3000 K Street, N.W., Suite 500  
Washington, D.C. 20007-5109  
Telephone: (202) 672-5485  
Facsimile: (202) 672-5399

09/590692 #3

Atty. Dkt. No. 024051/0135



**DECLARATION AND POWER OF ATTORNEY**

As a below named inventor, I HEREBY DECLARE:

THAT my residence, post office address, and citizenship are as stated below next to my name;

THAT I believe I am the original, first, and sole inventor (if only one inventor is named below) or an original, first, and joint inventor (if plural inventors are named below or in an attached Declaration) of the subject matter which is claimed and for which a patent is sought on the invention entitled

CLICK BASED TRADING WITH INTUITIVE GRID DISPLAY OF MARKET DEPTH

(Attorney Docket No. 024051/0135)

the specification of which (check one)

     is attached hereto.

  X   was filed on June 9, 2000 as United States Application Number or PCT International Application Number 09/590692 and was amended on      (if applicable).

THAT I do not know and do not believe that the same invention was ever known or used by others in the United States of America, or was patented or described in any printed publication in any country, before I (we) invented it;

THAT I do not know and do not believe that the same invention was patented or described in any printed publication in any country, or in public use or on sale in the United States of America, for more than one year prior to the filing date of this United States application;

THAT I do not know and do not believe that the same invention was first patented or made the subject of an inventor's certificate that issued in any country foreign to the United States of America before the filing date of this United States application if the foreign application was filed by me (us), or by my (our) legal representatives or assigns, more than twelve months (six months for design patents) prior to the filing date of this United States application;

THAT I have reviewed and understand the contents of the above-identified specification, including the claim(s), as amended by any amendment specifically referred to above;

THAT I believe that the above-identified specification contains a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention, and sets forth the best mode contemplated by me of carrying out the invention; and

THAT I acknowledge the duty to disclose to the U.S. Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, §1.56.

I HEREBY CLAIM foreign priority benefits under Title 35, United States Code §119(a)-(d) or § 365(b) of any foreign application(s) for patent or inventor's certificate, or §365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below any foreign application for patent or inventor's certificate or of any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number	Country	Foreign Filing Date	Priority Claimed?	Certified Copy Attached?

I HEREBY CLAIM the benefit under Title 35, United States Code § 119(e) of any United States provisional application(s) listed below.

U.S. Provisional Application Number	Filing Date
60/186,322	March 2, 2000

I HEREBY CLAIM the benefit under Title 35, United States Code, §120 of any United States application(s), or § 365(c) of any PCT international application designating the United States of America, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application.

U.S. Parent Application Number	PCT Parent Application Number	Parent Filing Date	Parent Patent Number

I HEREBY APPOINT the following registered attorneys and agents of the law firm of FOLEY & LARDNER to have full power to prosecute this application and any continuations, divisions, reissues, and reexaminations thereof, to receive the patent, and to transact all business in the United States Patent and Trademark Office connected therewith:

---

STEPHEN A. BENT	Reg. No. 29,768
DAVID A. BLUMENTHAL	Reg. No. 26,257
BETH A. BURROUS	Reg. No. 35,087
ALAN I. CANTOR	Reg. No. 28,163
WILLIAM T. ELLIS	Reg. No. 26,874
JOHN J. FELDHAUS	Reg. No. 28,822
PATRICIA D. GRANADOS	Reg. No. 33,683

JOHN P. ISACSON	Reg. No. 33,715
MICHAEL D. KAMINSKI	Reg. No. 32,904
LYLE K. KIMMS	Reg. No. 34,079
KENNETH E. KROSIN	Reg. No. 25,735
JOHNNY A. KUMAR	Reg. No. 34,649
GLENN LAW	Reg. No. 34,371
PETER G. MACK	Reg. No. 26,001
BRIAN J. MC NAMARA	Reg. No. 32,789
SYBIL MELOY	Reg. No. 22,749
RICHARD C. PEET	Reg. No. 35,792
GEORGE E. QUILLIN	Reg. No. 32,792
COLIN G. SANDERCOCK	Reg. No. 31,298
BERNHARD D. SAXE	Reg. No. 28,665
CHARLES F. SCHILL	Reg. No. 27,590
RICHARD L. SCHWAAB	Reg. No. 25,479
ARTHUR SCHWARTZ	Reg. No. 22,115
HAROLD C. WEGNER	Reg. No. 25,258

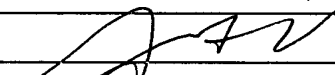
and I request that all correspondence be directed to:

William T. Ellis  
 FOLEY & LARDNER  
 Washington Harbour  
 3000 K Street, N.W., Suite 500  
 Washington, D.C. 20007-5109

Telephone: (202) 672-5485  
 Facsimile: (202) 672-5399

I UNDERSTAND AND AGREE THAT the foregoing attorneys and agents appointed by me to prosecute this application do not personally represent me or my legal interests, but instead represent the interests of the legal owner(s) of the invention described in this application.

I FURTHER 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 or any patent issuing thereon.

Name of first inventor	Gary Allan Kemp II
Residence	Winnetka, IL
Citizenship	USA
Post Office Address	335 Fairview Avenue, Winnetka, IL 60093
Inventor's signature	
Date	AUGUST 24, 2000

Name of second inventor                    Jens-Uwe Schluetter  
Residence                                    Evanston, IL  
Citizenship                                  USA Germany *JS*  
Post Office Address                        2320 Grey, Evanston, IL 60201  
Inventor's signature                        *JS*  
Date    August 125 / 2000

Name of third inventor                      Harris Brumfield  
Residence                                    Chicago, IL  
Citizenship                                  USA  
Post Office Address                        1840 Cleveland, Chicago, IL 60614  
Inventor's signature                        *HBF*  
Date    8/19/00

For: **CLICK BASED TRADING WITH INTUITIVE GRID DISPLAY OF MARKET DEPTH**

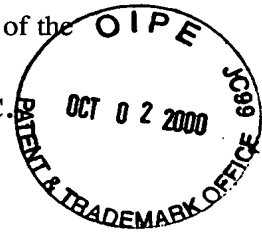
**VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY STATUS  
(37 CFR 1.9(f) AND 1.27 (c)) – SMALL BUSINESS CONCERN**

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, Illinois 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, CLICK BASED TRADING WITH INTUITIVE GRID DISPLAY OF MARKET DEPTH, by Gary Alan KEMP II et al. described in

- the specification filed herewith.
- application serial no 09/590,692, filed June 9, 2000
- 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

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:   
TITLE OF PERSON OTHER THAN OWNER: \_\_\_\_\_  
ADDRESS OF PERSON SIGNING: \_\_\_\_\_  
SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_



WTE

**UNITED STATES DEPARTMENT OF COMMERCE**  
**Patent and Trademark Office**  
 ASSISTANT SECRETARY AND COMMISSIONER  
 OF PATENTS AND TRADEMARKS  
 Washington, D.C. 20231

24051/135

DECEMBER 27, 2000

PTAS



\*101501820A\*

FOLEY & LARDNER  
 WILLIAM T. ELLIS  
 WASHINGTON HARBOUR  
 3000 K STREET NW, SUITE 500  
 WASHINGTON, DC 20007-5109

UNITED STATES PATENT AND TRADEMARK OFFICE  
 NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 10/02/2000

REEL/FRAME: 011188/0355  
 NUMBER OF PAGES: 4

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

KEMP, GARY ALLAN, II

DOC DATE: 08/24/2000

ASSIGNOR:

SCHLUETTER, JENS-UWE

DOC DATE: 08/25/2000

ASSIGNOR:

BRUMFIELD, HARRIS

DOC DATE: 08/19/2000

ASSIGNEE:

TRADING TECHNOLOGIES  
 INTERNATIONAL, INC.  
 1603 ORRINGTON AVENUE, SUITE 1300  
 EVANSTON, ILLINOIS 60201

SERIAL NUMBER: 09590692  
 PATENT NUMBER:

FILING DATE: 06/09/2000  
 ISSUE DATE:

011188/0355 PAGE 2

ANTIONE ROYALL, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS



**ASSIGNMENT AND AGREEMENT**

*WHEREAS*, Gary Allan Kemp II of 335 Fairview Avenue, Winnetka, IL 60093, and Jens-Uwe Schluetter of 2320 Grey, Evanston, IL 60201 Harris Brumfield of 1840 Cleveland, Chicago, IL 60614, (hereinafter referred to singly and collectively as "ASSIGNOR") have invented a certain invention entitled **CLICK BASED TRADING WITH INTUITIVE GRID DISPLAY OF MARKET DEPTH** (Atty. Dkt. No. 024051/0135) for which an application for United States Letters Patent was filed on June 9, 2000 as Application No. 09/590692; and

*WHEREAS*, Trading Technologies International, Inc., a corporation duly organized and existing under the laws of the State of Illinois, and having its principal place of business at 1603 Orrington Avenue, Suite 1300, Evanston, IL 60201 (hereinafter referred to as "ASSIGNEE") is desirous of acquiring the entire interest therein;

*NOW THEREFORE*, in consideration of One Dollar (\$1.00) and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, ASSIGNOR has sold, assigned, and transferred, and by these presents hereby sells, assigns, and transfers, unto ASSIGNEE, its successors and assigns, the full and exclusive right, title, and interest in and to (a) the above-identified invention or inventions and all improvements and modifications thereof, (b) the above-identified application and all other applications for Letters Patent of the United States and countries foreign thereto for the above-identified invention or inventions and all improvements and modifications thereof, (c) all Letters Patent which may issue from said applications in the United States and countries foreign thereto, (d) all divisions, continuations, reissues, and extensions of said applications and Letters Patent, and (e) the right to claim for any of said applications the full benefits and priority rights under the International Convention and any other international agreement to which the United States adheres; such right, title, and interest to be held and enjoyed by ASSIGNEE, its successors and assigns, to the full end of the term or terms for which any and all such Letters Patent may be granted as fully and entirely as would have been held and enjoyed by ASSIGNOR had this Assignment not been made.

*ASSIGNOR HEREBY AUTHORIZES AND REQUESTS* the Commissioner of Patents and Trademarks to issue said Letters Patent to ASSIGNEE as assignee of the entire interest, for the sole use and benefit of ASSIGNEE, its successors and assigns.

*ASSIGNOR HEREBY AGREES* (a) to communicate to ASSIGNEE, its successors and assigns, or their representatives or agents, all facts and information known or available to ASSIGNOR respecting said invention or inventions, improvements, and modifications including evidence for interference, reexamination, reissue, opposition, revocation, extension, or infringement purposes or other legal, judicial, or administrative proceedings, whenever requested by ASSIGNEE; (b) to testify in person or by affidavit as required by ASSIGNEE, its successors and assigns, in any such proceeding in the United States or a country foreign thereto; (c) to execute and deliver, upon request by ASSIGNEE, all lawful papers including, but not limited to, original, divisional, continuation, and reissue applications, renewals, assignments, powers of attorney, oaths, affidavits, declarations, depositions; and (d) to provide all reasonable assistance to ASSIGNEE, its successors and assigns, in obtaining and enforcing proper title in and

protection for said invention or inventions, improvements, and modifications under the intellectual property laws of the United States and countries foreign thereto.

ASSIGNOR HEREBY REPRESENTS AND WARRANTS that ASSIGNOR has the full and unencumbered right to sell, assign, and transfer the interests sold, assigned, and transferred herein, and that ASSIGNOR has not executed and will not execute any document or instrument in conflict herewith.

ASSIGNOR HEREBY GRANTS to the law firm of **Foley & Lardner** the power and authority to insert in this Assignment any further identification which may be necessary or desirable to comply with the rules of the U.S. Patent and Trademark Office for recordation of this Assignment.

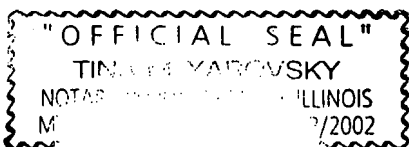
ASSIGNOR UNDERSTANDS AND AGREES that the attorneys and agents of the law firm of **Foley & Lardner** do not personally represent ASSIGNOR or ASSIGNOR's legal interests, but instead represent the interests of ASSIGNEE; since said attorneys and agents cannot provide legal advice to ASSIGNOR with respect to this Assignment, ASSIGNOR acknowledges its right to seek its own independent legal counsel.

Executed this 24<sup>th</sup> day of AUGUST, 2000.


  
\_\_\_\_\_  
Gary Allan Kemp II

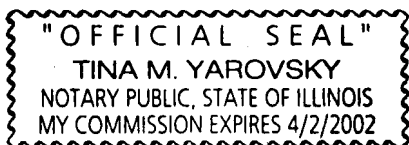
State of Illinois  
County of Cook ) ss.

On this 24<sup>th</sup> day of August, 2000, before me, a notary public in and for said county, appeared Gary Allan Kemp II, who is personally known to me to be the same person whose name is subscribed to the foregoing instrument, and he/she acknowledged that he/she signed, sealed, and delivered the said instrument as his/her free and voluntary act for the uses and purposes therein set forth.



(Seal)

  
\_\_\_\_\_  
Notary Public  
My Commission Expires: 4/2/2002



Executed this 25 day of August, 2000.

Jens-Uwe Schluetter  
Jens-Uwe Schluetter

State of Illinois )  
County of Cook )ss.

On this 25<sup>th</sup> day of August, 2000, before me, a notary public in and for said county, appeared Jens-Uwe Schluetter, who is personally known to me to be the same person whose name is subscribed to the foregoing instrument, and he/she acknowledged that he/she signed, sealed, and delivered the said instrument as his/her free and voluntary act for the uses and purposes therein set forth.



(Seal)

Tina M. Yarovsky  
Notary Public  
My Commission Expires: 4/2/2002

Executed this 19 day of Sept, 2000.

Harris Brumfield  
Harris Brumfield

State of IL )  
County of COOK )ss.

On this 19 day of Sept, 2000, before me, a notary public in and for said county, appeared Harris Brumfield, who is personally known to me to be the same person whose name is subscribed to the foregoing instrument, and he/she acknowledged that he/she signed, sealed, and delivered the said instrument as his/her free and voluntary act for the uses and purposes therein set forth.

(Seal)

Gayle A Hallen  
Notary Public  
My Commission Expires: 6/27/01





WTE  
UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office

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24051/135

DECEMBER '27, 2000

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\*101501820A\*

FOLEY & LARDNER  
WILLIAM T. ELLIS  
WASHINGTON HARBOUR  
3000 K STREET NW, SUITE 500  
WASHINGTON, DC 20007-5109

UNITED STATES PATENT AND TRADEMARK OFFICE  
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 10/02/2000

REEL/FRAME: 011188/0355  
NUMBER OF PAGES: 4

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

KEMP, GARY ALLAN, II

DOC DATE: 08/24/2000

ASSIGNOR:

SCHLUETTER, JENS-UWE

DOC DATE: 08/25/2000

ASSIGNOR:

BRUMFIELD, HARRIS

DOC DATE: 08/19/2000

ASSIGNEE:

TRADING TECHNOLOGIES  
INTERNATIONAL, INC.  
1603 ORRINGTON AVENUE, SUITE 1300  
EVANSTON, ILLINOIS 60201

SERIAL NUMBER: 09590692

FILING DATE: 06/09/2000

PATENT NUMBER:

ISSUE DATE:

011188/0355 PAGE 2

ANTIONE ROYALL, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS

**ASSIGNMENT AND AGREEMENT**

*WHEREAS*, Gary Allan Kemp II of 335 Fairview Avenue, Winnetka, IL 60093, and Jens-Uwe Schluetter of 2320 Grey, Evanston, IL 60201 Harris Brumfield of 1840 Cleveland, Chicago, IL 60614, (hereinafter referred to singly and collectively as "ASSIGNOR") have invented a certain invention entitled **CLICK BASED TRADING WITH INTUITIVE GRID DISPLAY OF MARKET DEPTH** (Atty. Dkt. No. 024051/0135) for which an application for United States Letters Patent was filed on June 9, 2000 as Application No. 09/590692; and

*WHEREAS*, Trading Technologies International, Inc., a corporation duly organized and existing under the laws of the State of Illinois, and having its principal place of business at 1603 Orrington Avenue, Suite 1300, Evanston, IL 60201 (hereinafter referred to as "ASSIGNEE") is desirous of acquiring the entire interest therein;

*NOW THEREFORE*, in consideration of One Dollar (\$1.00) and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, ASSIGNOR has sold, assigned, and transferred, and by these presents hereby sells, assigns, and transfers, unto ASSIGNEE, its successors and assigns, the full and exclusive right, title, and interest in and to (a) the above-identified invention or inventions and all improvements and modifications thereof, (b) the above-identified application and all other applications for Letters Patent of the United States and countries foreign thereto for the above-identified invention or inventions and all improvements and modifications thereof, (c) all Letters Patent which may issue from said applications in the United States and countries foreign thereto, (d) all divisions, continuations, reissues, and extensions of said applications and Letters Patent, and (e) the right to claim for any of said applications the full benefits and priority rights under the International Convention and any other international agreement to which the United States adheres; such right, title, and interest to be held and enjoyed by ASSIGNEE, its successors and assigns, to the full end of the term or terms for which any and all such Letters Patent may be granted as fully and entirely as would have been held and enjoyed by ASSIGNOR had this Assignment not been made.

*ASSIGNOR HEREBY AUTHORIZES AND REQUESTS* the Commissioner of Patents and Trademarks to issue said Letters Patent to ASSIGNEE as assignee of the entire interest, for the sole use and benefit of ASSIGNEE, its successors and assigns.

*ASSIGNOR HEREBY AGREES* (a) to communicate to ASSIGNEE, its successors and assigns, or their representatives or agents, all facts and information known or available to ASSIGNOR respecting said invention or inventions, improvements, and modifications including evidence for interference, reexamination, reissue, opposition, revocation, extension, or infringement purposes or other legal, judicial, or administrative proceedings, whenever requested by ASSIGNEE; (b) to testify in person or by affidavit as required by ASSIGNEE, its successors and assigns, in any such proceeding in the United States or a country foreign thereto; (c) to execute and deliver, upon request by ASSIGNEE, all lawful papers including, but not limited to, original, divisional, continuation, and reissue applications, renewals, assignments, powers of attorney, oaths, affidavits, declarations, depositions; and (d) to provide all reasonable assistance to ASSIGNEE, its successors and assigns, in obtaining and enforcing proper title in and

protection for said invention or inventions, improvements, and modifications under the intellectual property laws of the United States and countries foreign thereto.

ASSIGNOR HEREBY REPRESENTS AND WARRANTS that ASSIGNOR has the full and unencumbered right to sell, assign, and transfer the interests sold, assigned, and transferred herein, and that ASSIGNOR has not executed and will not execute any document or instrument in conflict herewith.

ASSIGNOR HEREBY GRANTS to the law firm of Foley & Lardner the power and authority to insert in this Assignment any further identification which may be necessary or desirable to comply with the rules of the U.S. Patent and Trademark Office for recordation of this Assignment.

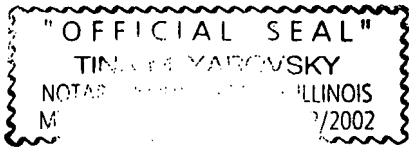
ASSIGNOR UNDERSTANDS AND AGREES that the attorneys and agents of the law firm of Foley & Lardner do not personally represent ASSIGNOR or ASSIGNOR's legal interests, but instead represent the interests of ASSIGNEE; since said attorneys and agents cannot provide legal advice to ASSIGNOR with respect to this Assignment, ASSIGNOR acknowledges its right to seek its own independent legal counsel.

Executed this 24<sup>th</sup> day of AUGUST, 2000.


  
\_\_\_\_\_  
Gary Allan Kemp II

State of Illinois )  
County of Cook )ss.

On this 24<sup>th</sup> day of August, 2000, before me, a notary public in and for said county, appeared Gary Allan Kemp II, who is personally known to me to be the same person whose name is subscribed to the foregoing instrument, and he/she acknowledged that he/she signed, sealed, and delivered the said instrument as his/her free and voluntary act for the uses and purposes therein set forth.



(Seal)

  
\_\_\_\_\_  
Notary Public  
My Commission Expires: 4/2/2002

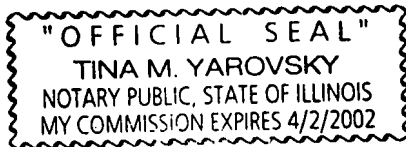


Executed this 25 day of August, 2000.

Jens-Uwe Schluetter  
Jens-Uwe Schluetter

State of Illinois )  
County of Cook )ss.

On this 25<sup>th</sup> day of August, 2000, before me, a notary public in and for said county, appeared Jens-Uwe Schluetter, who is personally known to me to be the same person whose name is subscribed to the foregoing instrument, and he/she acknowledged that he/she signed, sealed, and delivered the said instrument as his/her free and voluntary act for the uses and purposes therein set forth.



(Seal)

Tina M. Yarovsky  
Notary Public  
My Commission Expires: 4/2/2002

Executed this 19 day of Sept, 2000

Harris Brumfield  
Harris Brumfield

State of IL )  
County of Cook )ss.

On this 19 day of Sept, 2000, before me, a notary public in and for said county, appeared Harris Brumfield, who is personally known to me to be the same person whose name is subscribed to the foregoing instrument, and he/she acknowledged that he/she signed, sealed, and delivered the said instrument as his/her free and voluntary act for the uses and purposes therein set forth.

Gayle A. Hallen  
Notary Public  
My Commission Expires: 6/27/01

(Seal)







**Mailed**

MAR 06 2001

**Technology Center 2100**

Paper No. 6

William T. Ellis  
Foley & Lardner  
Washington Harbour  
3000 K Street NW, Suite 500  
Washington, DC 20007-5109

In re Application of: Gary Alan Kemp, II et al. )  
Application No. 09/590,692 )  
Filed: June 9, 2000 )  
For: CLICK BASED TRADING WITH )  
INTUITIVE GRID DISPLAY OF )  
MARKET DEPTH )

**DECISION ON PETITION  
FOR ACCELERATED  
EXAMINATION UNDER  
M.P.E.P. §708.02(VIII)**

This is a decision on the petition, filed August 21, 2000 under 37 C.F.R. §1.102(d) and M.P.E.P. §708.02(VIII): Accelerated Examination, to make the above-identified application special.

M.P.E.P. §708.02, Section VIII which sets out the prerequisites for a grantable petition for Accelerated Examination under 37 C.F.R. §1.102(d) states in relevant part:

A new application (one which has not received any examination by the examiner) may be granted special status provided that applicant (and this term includes applicant's attorney or agent) complies with each of the following items:

(a) Submits a petition to make special accompanied by the fee set forth in 37 CFR 1.17(i);

(b) Presents all claims directed to a single invention, or if the Office determines that all the claims presented are not obviously directed to a single invention, *will make an election without traverse* as a prerequisite to the grant of special status.

(c) Submits a statement(s) that a pre - examination search was made, listing the field of search by class and subclass, publication, Chemical Abstracts, foreign patents, etc. A search made by a foreign patent office satisfies this requirement;

(d) Submits one copy each of the references deemed most closely related to the subject matter encompassed by the claims if said references are not already of record; and

(e) Submits a detailed discussion of the references, which discussion points out, with the particularity required by 37 CFR 1.111(b) and (c), how the claimed subject matter is patentable over the references.

In those instances where the request for this special status does not meet all the prerequisites set forth above, *applicant will be notified and the defects in the request will be stated*. The application will remain in the status of a new application awaiting action in its regular turn. In those instances where a request is defective in one or more respects, applicant will be given one opportunity to perfect the request in a renewed petition to make special. If perfected, the request will then be granted. If not perfected in the first renewed petition, any additional renewed petitions to make special may or may not be considered at the discretion of the Group Special Program Examiner.

Applicant's submission is deficient because it does not meet the requirements of section (b). The petition does not contain the statement that Applicant will make an election *without traverse* if the Office determines that all claims are not obviously directed to a single invention.

Accordingly, the Petition is **DENIED**. The application file is being forwarded to Central Files to await examination in its proper turn based on its effective filing date.

Any request for reconsideration must be filed within two months of the mailing date of this decision.



Pinchus M. Laufer  
Special Programs Examiner  
Technology Center 2100  
Computer Architecture, Software, and Electronic Commerce  
(703) 306-4160

2161

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Attorney Docket No. 024051/0135

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Technology Center 2100

In re patent application of

Gary Alan KEMP II, et al.

Serial No.: 09/590,692

Filed: June 9, 2000

For: CLICK BASED TRADING WITH INTUITIVE GRID DISPLAY OF MARKET DEPTH



Group Art Unit: 2761

Examiner: Unassigned

#7  
S. G. H. /  
1/2/01

REQUEST FOR RECONSIDERATION

Commissioner for Patents  
Washington, D.C. 20231

Sir:

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Technology Center 2100

In reference to the Decision on Petition for Accelerated Examination under M.P.E.P. 708.02(VII) and the denial therein, mailed on March 6, 2001, Applicant hereby requests reconsideration.

In order to obviate the deficiency specified by the Examiner in this denial, Applicant hereby states that if the Office determines that all claims presented are not obviously directed to a single invention, that Applicant will make an election without traverse in response to an Examiner's telephone request.

In view of the foregoing statement to elect without traverse, Applicant respectfully requests that the Examiner's denial be reconsidered and withdrawn, and that the Applicant's petition for accelerated examination be granted.

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It is believed that no fee is required for the consideration of this paper. If a fee and/or petition is required for such consideration, Applicant hereby so petitions and authorizes the Office to charge any deficiency to our Deposit Account No. 19-0741.

Respectfully submitted,

MARCH 13, 2001

Date



Ankur D. Shah  
Registration No. 41,514

FOLEY & LARDNER  
3000 K Street, N.W.  
Suite 500  
Washington, D.C. 20007-5109  
Telephone No.: (202) 672-5300

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**APR 27 2001**

**Technology Center 2100**

*f. w*  
Paper No. 8

William T. Ellis  
Foley & Lardner  
Washington Harbour  
3000 K Street NW, Suite 500  
Washington, DC 20007-5109

In re Application of: Gary Alan Kemp, II et al. )  
Application No. 09/590,692 )  
Filed: June 9, 2000 )  
For: CLICK BASED TRADING WITH )  
INTUITIVE GRID DISPLAY OF )  
MARKET DEPTH )

**DECISION ON PETITION  
FOR ACCELERATED  
EXAMINATION UNDER  
M.P.E.P. §708.02(VIII)**

This is a decision on the supplemental petition, filed March 13, 2001 under 37 C.F.R. §1.102(d) and M.P.E.P. §708.02(VIII): Accelerated Examination, to make the above-identified application special. The petition was filed in response to a denial of the original petition filed August 21, 2000.

M.P.E.P. §708.02, Section VIII which sets out the prerequisites for a grantable petition for Accelerated Examination under 37 C.F.R. §1.102(d) states in relevant part:

A new application (one which has not received any examination by the examiner) may be granted special status provided that applicant (and this term includes applicant's attorney or agent) complies with each of the following items:

- (a) Submits a petition to make special accompanied by the fee set forth in 37 CFR 1.17(i);
- (b) Presents all claims directed to a single invention, or if the Office determines that all the claims presented are not obviously directed to a single invention, will make an election without traverse as a prerequisite to the grant of special status.
- (c) Submits a statement(s) that a pre - examination search was made, listing the field of search by class and subclass, publication, Chemical Abstracts, foreign patents, etc. A search made by a foreign patent office satisfies this requirement;
- (d) Submits one copy each of the references deemed most closely related to the subject matter encompassed by the claims if said references are not already of record; and
- (e) Submits a detailed discussion of the references, which discussion points out, with the particularity required by 37 CFR 1.111(b) and (c), how the claimed subject matter is

patentable over the references.

Applicant's submission corrects the deficiency noted in the original decision. The combined submissions meet all the criteria set out above, accordingly, the Petition is **GRANTED**.

The application file is being forwarded to the Examiner of Record for accelerated examination according to the procedures set forth in M.P.E.P. §708.02, Section VIII.

*Pinchas M. Laufer*

Pinchas M. Laufer  
Special Programs Examiner  
Technology Center 2100  
Computer Architecture, Software, and Electronic Commerce  
(703) 306-4160

#81/2

**ATTORNEYS AND COUNSELORS**

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**JACKSON  
WALKER  
L.L.P.**

**OFFICIAL**

**FACSIMILE**

**DATE:** May 30, 2001

**TO:** Examiner Weisberger

**FACSIMILE NO:** 703-308-1396

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JACKSON WALKER LLP

8/12

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Gary Alan Kemp II, et al

Serial No.: 09/590,692

Filing Date: June 9, 2000

Docket No.: 024051/0135

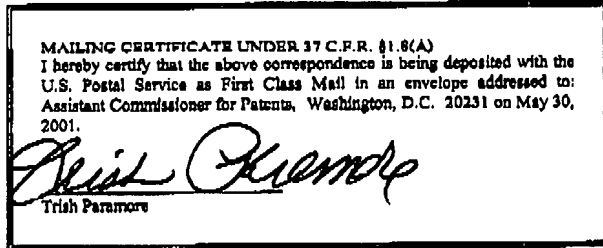
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**TRANSMITTAL LETTER**

May 30, 2001

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Assistant Commissioner for Patents  
Washington, D.C. 20231



Dear Sir:

Please change the correspondence address on the above identified patent application to:

Robert C. Klinger, Esq.  
Jackson Walker L.L.P.  
2435 North Central Expressway, Suite 600  
Richardson, Texas 75080  
972-744-2900 Phone  
972-744-2909 Fax

The Power of Attorney/Authorization of Agent is attached. If you have any further questions please contact the undersigned below.

Very truly yours,

*Robert C. Klinger*  
Robert C. Klinger  
Reg. No. 34,365

Robert C. Klinger  
Jackson Walker L.L.P.  
2435 North Central Expressway, Suite 600  
Richardson, Texas 75080  
Phone: (972) 744-2900 Fax: (972) 744-2909



TO: 703-308-1996 EXAMINER Weisberger

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<b>POWER OF ATTORNEY OR AUTHORIZATION OF AGENT</b>	Application Number	09/580,682
	Filing Date	08/09/2000
	First Named Inventor	Gary Alan Kemp II, et al
	Group Art Unit	2761
	Examiner Name	****
	Attorney Docket Number	024051/0136

I hereby appoint:

Practitioner of Customer Number  → Place Customer Number Bar Code Label here

OR

Practitioner(s) named below:

Name	Registration Number
Robert C. Klinger	34,385

as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the Patent and Trademark Office connected therewith.

Please change the correspondence address for the above-identified application to:

The above-mentioned Customer Number.

OR

<input checked="" type="checkbox"/> Firm or Individual Name	Jackson Walker L.L.P.				
Address	2435 North Central Expressway				
Address	Suite 600				
City	Richardson	State	Texas	ZIP	75060
Country	United States of America				
Telephone	972-744-2906	Fax	972-744-2809		

I am the:

Applicant.

Assignee of record of the entire interest. See 37 CFR 3.71. Certificate under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/95).

SIGNATURE of Applicant or Assignee of Record

Name	Michael G. Ryan
Signature	<i>Michael G. Ryan</i>
Date	May 15, 2001

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.

Total of 1 forms are submitted.

Burden Hour Statement: This form is estimated to take 3 minutes to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

JWDOCS 2648871v1

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May 30 2001 18:23

JACKSON WALKER LLP  
FAX: 972

*W*



**UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

*TS*

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
-----------------	-------------	----------------------	---------------------

09/590,692    06/09/00    KEMP    G    024051/0135

TM01/0608

WILLIAM T ELLIS  
FOLEY & LARDNER  
WASHINGTON HARBOR  
SUITE 500 3000 K STREET NW  
WASHINGTON DC 20007-5109

EXAMINER

WEISBERGER, R

ART UNIT	PAPER NUMBER
----------	--------------

2164

DATE MAILED: 06/08/01

*9*

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

*42*

# Office Action Summary

Application No.  
09/590,692

Applicant(s)  
Kemp et al.

Examiner  
Weisberger Richard C.

Group Art Unit  
2164



Responsive to communication(s) filed on \_\_\_\_\_

This action is **FINAL**.

Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire three month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

### Disposition of Claims

Claim(s) 1-40 is/are pending in the application.

Of the above, claim(s) 1-21 is/are withdrawn from consideration.

Claim(s) \_\_\_\_\_ is/are allowed.

Claim(s) 22-40 is/are rejected.

Claim(s) \_\_\_\_\_ is/are objected to.

Claims \_\_\_\_\_ are subject to restriction or election requirement.

### Application Papers

See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

The proposed drawing correction, filed on \_\_\_\_\_ is  approved  disapproved.

The specification is objected to by the Examiner.

The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. § 119

Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

All  Some\*  None of the CERTIFIED copies of the priority documents have been  
 received.

received in Application No. (Series Code/Serial Number) \_\_\_\_\_

received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

### Attachment(s)

Notice of References Cited, PTO-892

Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

Interview Summary, PTO-413

Notice of Draftsperson's Patent Drawing Review, PTO-948

Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

Art Unit: 1774

## DETAILED ACTION

### *Election/Restriction*

1. Claims 1-21 drawn to a graphical user interface are classified in class 345, subclass 327.
  - II. Claims 22-40 drawn to a method, computer readable medium, and client server system for placing a trade order, are classified in class 705, subclass 37.
1. The inventions are distinct, each from the other because of the following reasons:  
Inventions I and II are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions the inventions have different effects.
  2. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
  3. During a telephone conversation with Robert Klinger on May 22, 20001 a provisional election was made without traverse to prosecute the invention of Group II , claims 22-40. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-21 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Art Unit: 1774

4. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(I).

Examiner Requirements for Information (Rule 1.105)

1. The trade name or industry name or company name of the inventions of claims 22-40.
2. All non-patent literature used/relied upon or otherwise related to the drafting of the instant application.
3. All non-patent literature used/relied upon or otherwise related to the drafting of the invention of claims 22-40.
4. What specifically is being improved upon in the method for placing a trade order, a computer readable medium having program code for placing a trade order, and a client system for placing a trade order.
5. All non-patent literature, (i.e. conference papers, presentations, product brochures etc. ) used in the invention process including {such as designing around or providing a solution to accomplish the claimed invention)
6. Notwithstanding the dates of uses, submittal, or disclosure, any use of the claimed invention, any proposals submitted to corporate partners for the use or development of the claimed

Art Unit: 1774

invention, any papers presented to industry groups and/consortiums describing the claimed invention.

***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.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

Art Unit: 1774

such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 22-40 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over -----

[http://www.tradingtechnologies.com/products/xtrade\\_full.html](http://www.tradingtechnologies.com/products/xtrade_full.html) (viewed on 6/01/2001)

The applicant's claims are directed to a method for placing a trade order, a computer readable medium having program code for placing a trade order, and a client system for placing a trade order. These three inventions share common limitations and for the most part run parallel. Thus, prior art that discloses the method should inherently teach the computer readable medium and the client system. The prior art (the X trader system) teaches a method comprising the steps of displaying a market depth (see, bid price and ask price column), initiating a trade order with a single action (see, single click trading feature) and wherein the contents of the trade order are based in part of the preset parameters and the position of the pointer. Moreover, the method is said to include methods of performing both click trades and dime trades with the use of the +/- parameter.

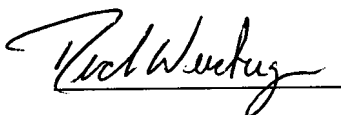
Due to the static representation of the prior art, it is difficult to determine if the claim limitations are inherent to or obvious from the X trader system. While the fact patterns are not exactly analogous, the courts have held that where the claimed and prior art products are identical

Art Unit: 1774

or substantially identical in structure or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness will be considered to have been established over functional limitations that stem from the claimed structure. In re Best, 195 USPQ 430, 433 (CCPA 1977), In re Spada, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). And the court offered the applicant a remedy for overcoming this rejection by asserting that the *prima facie* case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product. In re Best, 195 USPQ 430, 433 (CCPA 1977) Accordingly, it seems appropriate based in on the co-ownership of the prior art and the claimed invention for the applicant to supply evidence showing that the prior art X Trader system does not possess the characteristics of the claimed product.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure as each establishes a publication date for the X trader to be more than one year prior to the June 9, 2000 filing date of the instant application.

Respectfully;



Rich Weisberger

703 308 4408



Application/Control Number: 09/590,692

Page 7

Art Unit: 1774

**Notice of References Cited**

Application No.  
**09/590,692**

Applicant(s)  
**Kemp et al.**

Examiner  
**Weisberger Richard C.**

Group Art Unit  
**2164**

Page 1 of 1

**U.S. PATENT DOCUMENTS**

	DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS
A					
B					
C					
D					
E					
F					
G					
H					
I					
J					
K					
L					
M					

**FOREIGN PATENT DOCUMENTS**

	DOCUMENT NO.	DATE	COUNTRY	NAME	CLASS	SUBCLASS
N						
O						
P						
Q						
R						
S						
T						

**NON-PATENT DOCUMENTS**

	DOCUMENT (Including Author, Title, Source, and Pertinent Pages)	DATE
* U	www.tradingtechnologies.com/products/xtrade_full.html (viewed 5/22/2001)	< 6/9/2000
* V	Kharouf, A trading room with a view, Fututes, 27,11,	11/1998
W		
X		

OFFICIAL

RECEIVED  
7-31-01

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Gary Alan Kemp II, et al

Serial No.: 09/590,692

Filing Date: June 9, 2000

Docket No.: 024051/0135

#10  
P. Cotton  
8-2-01

TRANSMITTAL LETTER

July 31, 2001

Assistant Commissioner for Patents  
Washington, D.C. 20231

MAILING CERTIFICATE UNDER 37 C.F.R. § 1.8(A)  
I hereby certify that the above correspondence is being deposited with the U.S. Postal Service as First Class Mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231 on July 31, 2001.  
*William T. Ellis*  
William T. Ellis

Dear Sir:

Please change the correspondence address on the above identified patent application to:

William T. Ellis  
Foley & Lardner  
3000 K Street N.W. Suite 500  
Washington, D.C. 20007-5109  
202-672-5300 Phone  
202-672-5399 Fax

If you have any further questions please contact the undersigned below.

Very truly yours,

*Robert C. Klinger*  
Robert C. Klinger  
Reg. No. 34,365

Robert C. Klinger  
Jackson Walker L.L.P.  
2435 North Central Expressway, Suite 600  
Richardson, Texas 75080  
Phone: (972) 744-2900 Fax: (972) 744-2909

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Attorney Docket No. 024051/0135



Applicant: Gary Alan KEMP II, et al.  
Title: CLICK BASED TRADING WITH MARKET DEPTH DISPLAY  
Serial No.: 09/590,692  
Filed: June 9, 2000  
Examiner: Weisberger, R.  
Art Unit: 2164

#12/a  
D. Collins  
10-12-01

AMENDMENT AND REPLY UNDER 37 C.F.R. § 1.111

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OCT 11 2001  
Technology Center 2100

Commissioner for Patents  
Washington, D.C. 20231

12/17/2001 EEKUBAY1 00000002 09590692

01-FC:215 Sir: ~~55.00 OP~~  
02 FC:203 243.00 OP

In response to the Office Action dated June 8, 2001, please amend the application as follows and consider the remarks contained herein.

IN THE SPECIFICATION:

Adjustment date: 12/17/2001 EEKUBAY1  
10/10/2001 SZEWDIE1 00000052 09590692  
01 FC:103 ~~-486.00 OP~~

Please replace the paragraph beginning at page 13, line 14, with the following rewritten paragraph:

--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

a'

10/10/2001 SZEWDIE1 00000052 09590692

01 FC:103 ~~486.00 OP~~

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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.--

al

IN THE CLAIMS:

Please cancel claims 1-21 without prejudice or disclaimer.

In accordance with 37 C.F.R. § 1.121(c)(3), please substitute for pending claims 22, 23, 30 and 36 the following clean version in which this claim has been amended. The changes to the claim are shown explicitly in the attached "Version With Markings Showing Changes Made."

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22. (Amended) A method of placing a trade order for a commodity on an electronic exchange, using a graphical user interface and a user input device and having preset parameters for trade orders, said method comprising:

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displaying the market depth of a commodity traded in a market, 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; and

initiating placement of a trade order of the commodity through a single action of the user input device with a pointer of the user input device positioned over an area in said dynamic displays of bids and asks;

wherein the contents of the trade order are based in part upon the preset parameters and the position of the pointer at the time of said single action.

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~~23. (Amended) A method of placing a trade order according to claim 22, 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 display 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 display region.~~

Sub D3  
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~~30. (Amended) A computer readable medium having program code recorded thereon, for execution on a computer to place a trade order according to claim 29, 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 display 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 display region.~~

Sub D5  
A4

~~36. (Amended) A client system for placing a trade order for a commodity according to claim 35, wherein said trade order characteristics setting 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 display 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 display region.~~

[

Please add the following new claims:

20 41. (New) A method according to claim 22, wherein said displaying the market depth of a commodity traded in a market further comprises displaying said bids and asks in a vertical orientation.

24 42. (New) A method according to claim 22, wherein said displaying the market depth of a commodity traded in a market further comprises displaying said bids and asks in a horizontal orientation.

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22/23. (New) A method according to claim 22, wherein a plurality of said displayed bids and asks in the market include bid and ask quantities of the commodity.

23/44. (New) A method according to claim 22, wherein said displaying the market depth of a commodity traded in a market further comprises displaying said bids and asks in different colors.

24/45. (New) A method according to claim 22, further comprising re-centering said prices corresponding to the bids and asks about an inside market price upon receipt of a re-centering instruction.

25/46. (New) A method according to claim 22, further comprising dynamically displaying working orders in alignment with the prices corresponding thereto.

26/47. (New) A method of displaying according to claim 22, 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.

27/48. (New) A method according to claim 22, 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.

28/49. (New) A method according to claim 22, 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.

29/50. (New) A method of displaying according to claim 22, 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.

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30/51. (New) A computer readable medium according to claim 29, further comprising program code to ensure that said displayed bids, asks and prices are oriented vertically.

31/52. (New) A computer readable medium according to claim 29, further comprising program code to ensure that said displayed bids, asks and prices are oriented horizontally.

32/53. (New) A computer readable medium according to claim 29, further comprising program code to ensure that a plurality of bids and asks in the market include bid and ask quantities of the commodity.

33/54. (New) A computer readable medium according to claim 29, further comprising program code to ensure that bids and asks are displayed in different colors.

34/55. (New) A computer readable medium according to claim 29, 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.

35/56. (New) A computer readable medium according to claim 29, further comprising program code for dynamically displaying working orders in alignment with the prices corresponding thereto.

36/57. (New) A computer readable medium according to claim 29, 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.

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37/58. (New) A computer readable medium according to claim 29, further comprising program code to ensure that said statically displayed prices are displayed in at least one direction in numerical order.

38/59. (New) A computer readable medium according to claim 29, further comprising program code to ensure that said statically displayed prices are displayed along a single line in numerical order.

39/60. (New) A computer readable medium according to claim 29, further comprising program code for dynamically displaying a last traded quantity for said commodity in alignment with the price corresponding thereto.

40/61. (New) A client system according to claim 35, wherein said displays are oriented vertically.

41/62. (New) A client system according to claim 35, wherein said displays are oriented horizontally.

42/63. (New) A client system according to claim 35, wherein said displays of the pluralities of bids and asks in the market include bid and ask quantities of the commodity.

43/64. (New) A client system according to claim 35, wherein said displays are displayed in different colors.

44/65. (New) A client system according to claim 35, 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.

45/66. (New) A client system according to claim 35, further comprising a display of working orders displayed in alignment with the prices corresponding thereto.

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46/67. (New) A client system according to claim 35, 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.

47/68. (New) A client system according to claim 35, wherein said static display of prices is displayed in at least one direction in numerical order.

48/69. (New) A client system according to claim 35, wherein said static display of prices is displayed along a single line in numerical order.

49/70. (New) A client system according to claim 35, wherein said display device displays a last traded quantity for said commodity in alignment with the price corresponding thereto.

71. (New) A method of placing a trade order for a commodity on an electronic exchange, using a graphical user interface and a user input device and having preset parameters for trade orders, said method comprising:

statically displaying a plurality of prices for the commodity in at least one direction in numerical order;

providing a bid display region and an ask display region substantially adjacent to said display of prices, wherein a bid or an ask in the market for the commodity may be displayed dynamically and in alignment with a price corresponding thereto;

initiating placement of a trade order of the commodity through a single action of the user input device with a pointer of the user input device positioned within one of said display regions;

wherein the contents of the trade order are based in part upon the preset parameters and the position of the pointer at the time of said single action.

72. (New) A method according to claim 71, further comprising re-centering said prices corresponding to the bids and asks about an inside market price upon receipt of a re-centering instruction.

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73. (New) A method according to claim 71, further comprising dynamically displaying working orders in alignment with the prices corresponding thereto.

74. (New) A method of displaying according to claim 71, 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.

75. (New) A method according to claim 71, 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.

76. (New) A method of displaying according to claim 71, 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.

77. (New) A program product having computer readable program code, for execution on a computer having a graphical user interface and a user input device and having preset parameters for trade orders, to place a trade order for a commodity on an electronic exchange, the program code for causing a machine to perform the following method steps:

displaying a plurality of prices for the commodity in at least one direction in numerical order;

providing a bid display region and an ask display region substantially adjacent to said display of prices, wherein a bid or an ask in the market for the commodity may be displayed dynamically and in alignment with a price corresponding thereto;

initiating placement of a trade order of the commodity through a single action of the user input device with a pointer of the user input device positioned within one of said display regions;

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setting characteristics of the trade order based in part upon the preset parameters and the position of the pointer at the time of said single action.

78. (New) A program product according to claim 77, 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.

79. (New) A program product according to claim 77, further comprising program code for dynamically displaying working orders in alignment with the prices corresponding thereto.

80. (New) A program product according to claim 77, 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.

81. (New) A program product according to claim 77, further comprising program code to ensure that said statically displayed prices are displayed along a single line in numerical order.

82. (New) A program product according to claim 77, further comprising program code for dynamically displaying a last traded quantity for said commodity in alignment with the price corresponding thereto.

83. (New) A client system for placing a trade order for a commodity on an electronic exchange, the system comprising:

a display device for statically displaying a plurality of prices for the commodity in at least one direction in numerical order and for providing a bid display region and an ask display region substantially adjacent to said display of

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prices, wherein a bid or an ask in the market for the commodity may be displayed dynamically and in alignment with a price corresponding thereto;

a user input device for positioning a pointer thereof over an area within one of said display regions and for initiating placement of a trade order of the commodity through a single action of the user input device;

a trade order characteristic setting component for setting characteristics of the trade order based in part upon the preset parameters and the position of the pointer at the time of said single action.

84. (New) A client system according to claim 83, wherein said display of prices corresponding to the bids and asks is re-centered about an inside market price upon receiving a re-centering instruction from a user.

as 85. (New) A client system according to claim 83, further comprising a display of working orders displayed in alignment with the prices corresponding thereto.

B 86. (New) A client system according to claim 83, 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.

87. (New) A client system according to claim 83, wherein said static display of prices is displayed along a single line in numerical order.

88. (New) A client system according to claim 83, wherein said display device displays a last traded quantity for said commodity in alignment with the price corresponding thereto.

**REMARKS**

The client assignee in the present application has decided to move the correspondence address back to Foley & Lardner. Accordingly, a Change of Correspondence Address form has been submitted on July 31, 2001.

The Examiner has restricted this application as follows:

- I. Claims 1-21 drawn to a graphical user interface classified in class 345, subclass 327; and
- II. Claims 22-40 drawn to a method, computer readable medium, and client server system for placing a trade order, classified in class 705, subclass 37.

During a telephone conversation with the Examiner on May 22, 2001 a provisional election was made without traverse to prosecute the invention of Group II Claims 22-40. Affirmation of this election is hereby provided, confirming that Claims 1-21 are withdrawn from further consideration by the Examiner in this application. Claims 1-21 have been cancelled without prejudice or disclaimer.

Claim 22 has been amended to correct an editorial error. Claims 23, 30 and 36 have been amended to better define the claimed invention. These claims have not been narrowed. Claims 41-88 have been added to further define the invention. The specification has been amended editorially to insert a mistakenly omitted word, the mistake being evident from the examples in the specification. No new matter has been introduced. Accordingly, claims 22-88 are pending for consideration.

Through Rule 1.105, the Examiner has requested six (6) pieces of information from the Applicant. Each of these six requests will be responded to sequentially as follows.



In response to the first request, the trade name or industry name or company name of the inventions of Claims 22-40 are Market Depth (MD) Trader and Mercury Display.

In response to the second and third requests, Applicant submits that no non-patent literature was used, related to or relied upon to draft the instant application or to the drafting of the invention of Claims 22-40, or the newly added claims 41-88. The application process started from the U.S. provisional patent application identified as Serial Number 60/186,322 filed March 2, 2000, a copy of which is enclosed and identified as Appendix A attached to this response.

In response to the fourth request, Applicant submits that what is specifically being improved upon is a method for placing a trade order, a computer readable medium having program code for placing a trade order, and a client system for placing a trade order, that includes, but is not limited to, a more intuitive display of the market depth of a commodity along with the ability to use such a display to place trade orders quickly and efficiently.

The present invention is distinguishable from the prior art both in appearance and in function, and is described in greater detail in the specification of the present application. Specifically, the present invention is directed to allowing for the placement of trade orders in an intuitive display of market depth of a commodity trade in a market. In the trading method of the present invention, trade orders of the commodity are initiated through a single action (as defined in the specification) of a user input device with a pointer of the user input device positioned within a bid display region or an ask display region. The contents of the trade order are based, in part, upon the preset parameters and the position of the pointer at the time of the single action (see e.g., claims 22, 29 and 35). By allowing the trader to see the dynamic market depth of a commodity and to trade directly within the market depth of that commodity, the invention provides the trader with improved versatility and efficiency in placing, and thus executing, trade orders for commodities in an electronic exchange. The intuitive grid



display and trading method of the present invention ensure fast and accurate execution of trades by displaying market depth. In embodiments recited in the dependent claims, the market depth is displayed 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.

In response to the fifth inquiry, Applicant submits that there was no known existing literature used in the invention process.

In response to the sixth inquiry, the attached brochures and presentations are included as follows:

Appendix B is a Power Point presentation of Applicant's X\_TRADER technology, as well as an overview of the Market Depth Trader of the present invention disclosed in the present application and claimed in Claims 22-40. This is not a representation as to the scope of the invention. This disclosure was first made to a third party not earlier than March 2, 1999.

Appendix C provides the X\_TRADER User Guide that has been improved upon to include the Market Depth Trader Window and identified as the "MD TRADER," the subject of the present invention. This is not a representation as to the scope of the invention. This disclosure was first made to a third party not earlier than March 2, 1999.

Appendix D is a brochure depicting the X\_TRADER, and Appendix E is a brochure depicting the MD Trader, the subject of the present application and claimed in pending Claims 22-40. These are not representations as to the scope of the invention. This disclosure was first made to a third party not earlier than March 2, 1999.

The prior art X\_TRADER product cited by the Examiner does not include the screen display of the present invention which, in a commercial embodiment, is



known as MD Trader. When, in the remarks contained herein, reference is made to "X\_TRADER", Applicant is referring to the prior art system cited by the Examiner. Applicant notes, however, that as used in current marketing, the term "X\_TRADER" refers to a package of products including both the prior art cited by the Examiner as well as a display in accordance with the present invention.

### CLAIM REJECTIONS

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.

Regarding the scope of a "single action," the Examiner is respectfully directed to page 6, line 27 to page 7, line 2 of the specification. There, it is described that the scope of the "single action" includes a single click of a mouse, but 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 is considered a "single action" of the user for the purposes of the present invention.

Regarding the phrase "based in part" in claim 22, this term simply means not based "solely" on the preset parameters.

Regarding the phrase "current net position" in claim 25, Applicant respectfully submits that this term is disclosed and defined in multiple locations within the specification; see, for example, page 18, lines 12-19 wherein current net position is explained as the difference between the number of contracts of a commodity the trader has bought and the number of contracts of that commodity he has sold.

Claims 22-40 stand rejected under 35 USC § 102 (e) as allegedly anticipated by, or, in the alternative, unpatentable under 35 USC § 103(a) over the description of the X\_TRADER system in Applicant's website as identified in the Office Action on page 5. As requested by the Examiner, Applicant distinguishes the presently claimed invention, as disclosed in the present patent application and claimed in Claims 22-88.

Independent Claim 22 recites, in pertinent part, "displaying market depth . . . through a dynamic display of a plurality of bids and a plurality of asks in the market for the commodity" and "aligned with a static display of prices corresponding thereto". Independent claims 29 and 35 recite similar limitations. As mentioned above, the resulting intuitive grid display and the trading method used therewith allows the trader to trade more quickly and effectively. It is respectfully submitted that the X\_TRADER system did not contain a dynamic display of bids or asks in alignment with a static display of prices corresponding thereto.

Dependent Claims 23-28 and 41-50 all depend from independent Claim 22, and thus include all the limitations thereof. Accordingly, these dependent claims are distinguishable over Applicant's X\_TRADER system as well.

With respect to independent Claim 29, there is recited a computer readable medium having similar limitations to that of the independent Claim 22 discussed above. Independent Claim 29 is distinguished from Applicant's X\_TRADER system at least in that the first program code displays market depth "through a dynamic display of a plurality of bids and a plurality of asks in the market of the commodity, including the bid and ask quantities of the commodity, aligned with a static display of prices corresponding thereto[.]" Dependent Claims 30-34 and 51-60 all depend from independent Claim 29, and thus include all the limitations thereof. Independent Claim 29 is believed to be distinguishable and allowable over Applicant's X\_TRADER system for the foregoing reasons.

With respect to independent Claim 35, there is recited a client system for placing a trade order for a commodity on an electronic exchange, where the system comprises a display device for displaying the market depth of a commodity traded in a market "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 the static display of prices corresponding thereto[.]" Dependent Claims 36-40 and 61-70 all depend from independent Claim 35, and thus include all the limitations thereof. Independent Claim 35 is believed to be distinguishable and allowable over Applicant's X\_TRADER system for the foregoing reasons. It is respectfully submitted that these two claimed features distinguish the present invention over the prior art and achieve technical advantages for the foregoing reasons.

Claims 23, 30 and 36 have been amended to make clear that the trade order is placed as a buy order, for example, if the position of the pointer at the time of the single action is within the region where bids are or would be displayed, and not just if the pointer was positioned over bids actually displayed



as the original claim language may incorrectly imply. In the preferred embodiment of the display, this region corresponds to the cells in the Bid column (also referred to in the specification as the BidQ column or BidQ field). Similarly, if the pointer was positioned within the region where asks are or would be displayed (e.g., the Ask column), then the trade order is placed as a sell order.

Claims 41-70 have been added to further define the invention. These are dependent claims directed to features of the invention described in the specification. For example, with respect to claims 47, 57 and 67, see the E/W column (1001 in Figure 3 and 1208 in Figure 5) and the description on pages 13 and 19 of the specification; the B and S quantities in this column refer to filled buy and sell orders, respectively. Applicant notes that the "E" in E/W has been defined in the specification and claims as referring to "entered" orders. In the parlance of those skilled in the art of the present invention, the word "executed" is often used in place of the term "entered" as used and defined by the inventors in the present application. With respect to claims 48, 49, 58, 59, 68 and 69, the various figures of the specification clearly show the display of prices along a single line and in numerical order. With respect to claims 50, 60 and 70, see the LTQ column (1006 in Figure 3 and 1207 in Figure 5) and the description on pages 13 and 18 in the specification. Claims 41-46, 51-56 and 61-66 correspond to subject matter in original claims 2-7, 9-14 and 16-21, respectively. No new matter has been introduced and all of these claims depend from the pending independent claims.

New claims 71-88 have been added to further protect applicants' invention. These claims have been added to more directly address the scenario where the exchange may not provide full data on the market depth of a commodity or where there are actually no bids or asks in the market. In both of these cases, there may not be multiple bids or asks to display. Thus, the invention will display those bids and asks for which it has received data in the bid and ask display regions. Furthermore, the invention will allow the placement of trade orders at prices for which there may not be a bid or asks displayed. These



claims do not raise any issues of new matter and distinguish over the X\_TRADER display for at least the following reasons. The X\_TRADER display does not provide a static display of a plurality of prices for the commodity in at least one direction in numerical order, and does not provide a bid display region and an ask display region substantially adjacent to said display of prices, wherein a bid or an ask in the market for the commodity may be displayed dynamically and in alignment with a price corresponding thereto.

In summary, it is respectfully submitted that pending Claims 22-88 are in proper form, and are distinguishable over Applicant's X\_TRADER trading software as discussed above. The Applicant appreciates the Examiner's thorough consideration of Applicant's invention, including pending Claims 22-40, in view of Applicant's X\_TRADER software. It is respectfully submitted that Applicant has addressed the Examiner's objections, requirements for information, and rejection based on Applicant's X\_TRADER software.

It is respectfully submitted that Claims 22-88 are in condition of allowance, and that this application should be passed on to issuance. If the Examiner has any other matters which remain, the Examiner is encouraged to contact the undersigned attorney to resolve these matters by Examiner's amendment where possible.

Respectfully submitted,

OCTOBER 9, 2001

Date



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SHOULD ADDITIONAL FEES BE NECESSARY IN CONNECTION WITH THE FILING OF THIS PAPER, OR IF A PETITION FOR EXTENSION OF TIME IS REQUIRED FOR TIMELY ACCEPTANCE OF SAME, THE COMMISSIONER IS HEREBY AUTHORIZED TO CHARGE DEPOSIT ACCOUNT NO. 19-0741 FOR ANY SUCH FEES; AND APPLICANT(S) HEREBY PETITION FOR ANY NEEDED EXTENSION OF TIME.



**VERSION WITH MARKINGS TO SHOW CHANGES MADE****IN THE SPECIFICATION:**

Paragraph beginning at page 13, line 14 has been amended as follows:

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.

**IN THE CLAIMS:**

Please amend the claims as follows:

22. (Amended) A method of placing a trade order for a commodity on an electronic exchange, using a graphical user interface and a user input device and having preset parameters for trade orders, said method comprising:

displaying the market depth of a commodity traded in a market, 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; and

initiating placement of a trade order of the commodity through a single action of the user input device [initiating placement of a trade order of the commodity through a single action of the user input device] with a pointer of the user input device positioned over an area in said dynamic displays of bids and asks;

wherein the contents of the trade order are based in part upon the preset parameters and the position of the pointer at the time of said single action.

23. (Amended) A method of placing a trade order according to claim 22, wherein said trade order is a buy order if the position of the pointer at the time of said single action is within [the display of bids] a bid display 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 [the display of asks] an ask display region.

30. (Amended) A computer readable medium having program code recorded thereon, for execution on a computer to place a trade order according to claim 29, 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 [the display of bids] a bid display 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 [the display of asks] an ask display region.

36. (Amended) A client system for placing a trade order for a commodity according to claim 35, wherein said trade order characteristics setting 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 [the display of bids] a bid display 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 [the display of asks] an ask display region.

A large, stylized handwritten mark, possibly a signature or initials, located in the bottom right corner of the page.



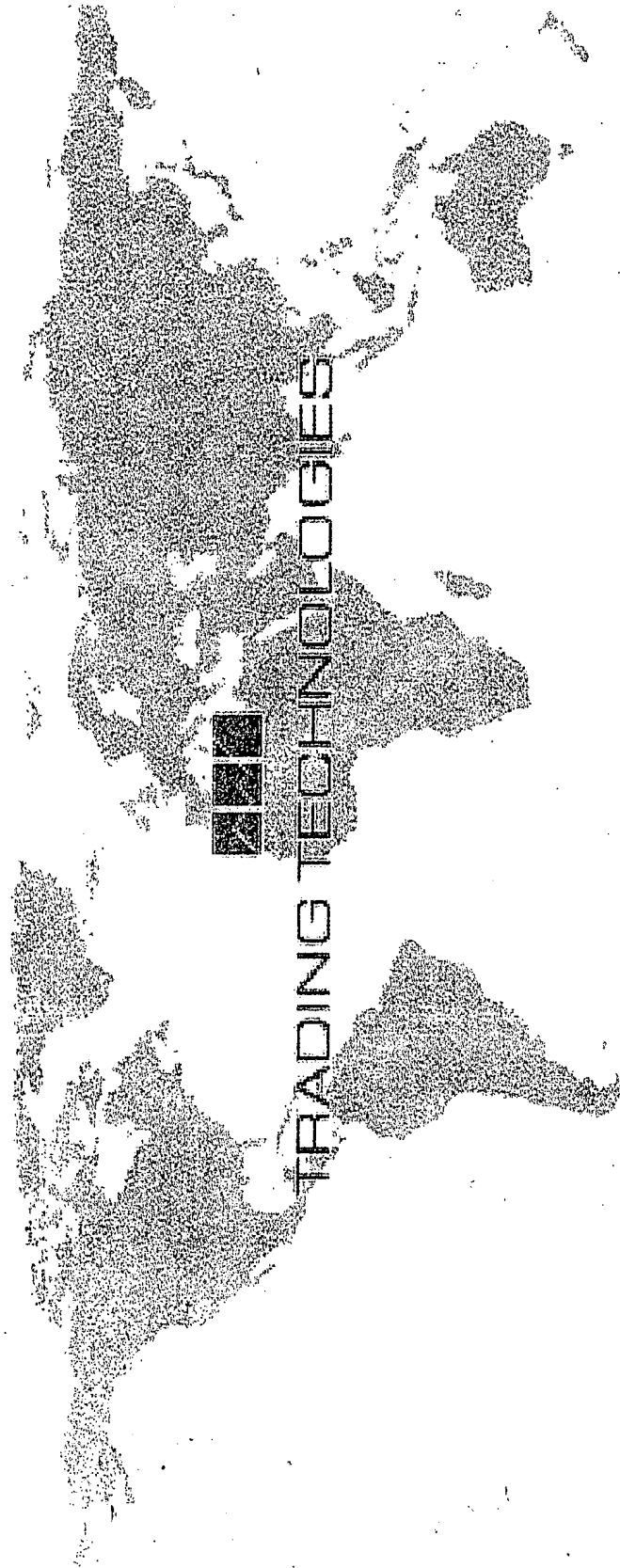
Please note:

appendices A, C and D. are  
missing from Paper #12.

APPENDIX  
A, C, D  
ARE MISSING  
FROM FILE



TRADING TECHNOLOGIES™





# TRADING TECHNOLOGIES™

Trading Technologies suite of products gives you and your customers the best technological edge in the business. Combining universal exchange/marketplace access, high performance, and full customization, X\_TRADER, with its sophisticated trading tools, enhances your presence in all the world's open-access electronic markets.

**X\_TRADER®** the ultra-fast, flexible trading screen for all stock, bond, futures and options trading

**X\_QUOTE™** provides advanced quoting with sophisticated order and trade management.

**GUARDIAN™** monitors system/exchange performance and administration.

**X\_WEB™** is an extraordinarily fast, secure, internet-based trading system for the world's electronic markets that is designed specifically for massive scalability.

**X\_RISK™** is the software tool that enables risk managers, desk managers and any authorized trader to monitor all trading activity.

**X\_MARKET MAKER™** provides you with a market making screen that allows you to enter two-sided markets with a single send command, as well as other market making features.

**TT EXCHANGE™** is a highly flexible, state of the art, exchange-matching system designed to automate any exchange, OTC, multi-dealer or B2B marketplace.





LIFFE: C C 5

0 x 0.000 C FEB00 GTD Limit <None>

ALASTAIR APB713

Buy Sell

10 0 0.000

10 0 0.000

1 540 98.005 98.010 79 1 5 5 98.005

Product	Depth	WkBuys	BidQty	BidPrc	AskQty	WkSells	NetPos	FilePos	LastPrc
C-FEB00	1	540	98.005	98.010	79	1	5	5	98.005

## Market

The Market window combines your Order Entry and Market Grid tools. These are your principal trading tools that allow you to monitor the current market and place orders.

Click Trading is a feature of the Order Entry window that allows you to trade with a single click of your mouse.

LIFFE:EO C AWS:OC 60

10:54:04

<Default>

0 0 0

1 5

10 20

50 100

CLR

0 100

DelAll

DelBids

DelOffers

TradeOut

Patm Pending

130
125
120
115
110
105
100
95
90
85
80
75
70
65
60
55
50
45

The **Market Depth Trader** window allows the trader to use one click of the mouse to buy or sell products. The grid format dynamically displays the market depth for a given instrument, and enables the trader to enter orders quickly by simply clicking on specific cells in the grid layout.



## Order Book

The Order Book provides information about your current open orders. You can change or delete orders. You may also perform an inquiry to determine the status of an open order, and apply one or more filters to quickly sort and display data.

The Order Book window includes a title bar, a menu bar, and a toolbar. The main area is divided into several sections:

- Order Entry:** Fields for Order No., Product, and Price.
- Order Status:** A dropdown menu currently set to '<EMPTY>'. Below it are fields for Order No. (1441151880772988) and Working (1441151880772988).
- Table:** A table with columns: #, Exch, Status, Order No., BS, O/C, Qty, Product, M/M/M/W, Price. It contains three rows of data.

#	Exch	Status	Order No.	BS	O/C	Qty	Product	M/M/M/W	Price
1	LIFFE			B	O	1	B	JUN00	102.07
2	LIFFE			S	O	1	C	FEB00	98.000
3	LIFFE			B	O	1	C	FEB00	97.990

## Fill and Position panes

The Fill window provides detailed information about the current day's trades. The Fills pane (top section) reflects the exchange-confirmed data about a trade. Use filters to narrow the range of orders displayed. The Position pane (middle section) provides your net position summary by exchange/marketplace, product and contract. The Fast Fill pane (bottom section--supported by some exchanges) displays partial trade information until the confirmed trade data is received from the exchange.

The Fill window is divided into three main sections:

- Table 1:** Trade data with columns: Exch, Account, BS, O/C, Price, Cur, Prod, M/M/M/W, Status. It shows four rows of trade data.
- Table 2:** Position summary with columns: Exchange, Product, BuyQty, SellQty, NetQty, P/L (Last), Av. It shows data for LIFFE-A.
- Table 3:** Fast Fill data with columns: Exch, Account, BS, O/C, Price, Cur, Prod, M/M/M/W, Status. It shows four rows of partial trade data.

Exch	Account	BS	O/C	Price	Cur	Prod	M/M/M/W	Status
LIFFE	Broker003	B	O	101.98	EUR	B	Sep99	
LIFFE	Broker003	B	O	101.98	EUR	B	Sep99	
LIFFE	Broker003	S	O	101.98	EUR	B	Dec99	
LIFFE	Broker003	S	O	101.98	EUR	B	Dec99	

Exchange	Product	BuyQty	SellQty	NetQty	P/L (Last)	Av
LIFFE-A		485	4586	4111		
LIFFE-A		188	4196	4111		
LIFFE-A		50	145	95	1862.91	66
LIFFE-A		10	10	0	33.90	95

Exch	Account	BS	O/C	Price	Cur	Prod	M/M/M/W	Status
LIFFE	Broker003	B	O	101.98	EUR	B	Sep99	
LIFFE	Broker003	B	O	101.98	EUR	B	Sep99	
LIFFE	Broker003	S	O	101.98	EUR	B	Dec99	
LIFFE	Broker003	S	O	101.98	EUR	B	Dec99	



## Excel Two-Way Link for Theoretical & Implied Pricing

Link a Microsoft Excel worksheet to X\_TRADER to calculate theoretical bid/ask prices and/or implied prices using your proprietary pricing model(s).

The screenshot shows the X-Trader interface with a control panel on the left and an Excel spreadsheet on the right. The control panel includes fields for '0 x 39.55 APPLE JUL99 GTD Limit <None>', '0 39.55', 'ALASTAIR', 'DOCA', and buttons for 'Buy', 'Sell', 'Open', 'M1', 'Cross With', 'Clear', 'Lock', and 'Clear'.

The Excel spreadsheet, titled 'Microsoft Excel - Book1', displays the following data:

Month	BidQty	BidPrc	AskPrc	AskQty	Mkts	LastP	LastQ	Total	TheoPrc	TheoBid	TheoAsk	Expiry
JUL99	760	39.55	40.10	120		40.10	60	3000	39.85	39.6	39.75	JUL199

The spreadsheet also shows a table with columns: BidPrc, AskPrc, TheoPrc, TheoBid, TheoAsk. The values are: 39.55, 40.1, 39.85, 39.6, 39.75.

## Customer Defaults

Define Customer Default profiles to establish all of the most common order variables by customer name. Multiple profiles allow you to quickly switch between customers or apply different trading profiles for the same customer.

The 'Customer Defaults' dialog box shows a list of customers: 'Customer', 'SEC', and 'Account'. The 'Default' section has a checked box and an unchecked box. The dialog also includes a 'Sheet' dropdown menu and a 'Sheet2' dropdown menu.

## X\_TRADER Quoting

You can generate quotes by using a proprietary theoretical pricing model, X\_TRADER Spread Table(s) and Product Group(s), or you can manually enter individual quotes. You can respond to RFQs manually or enable auto quoting to automatically send a response.

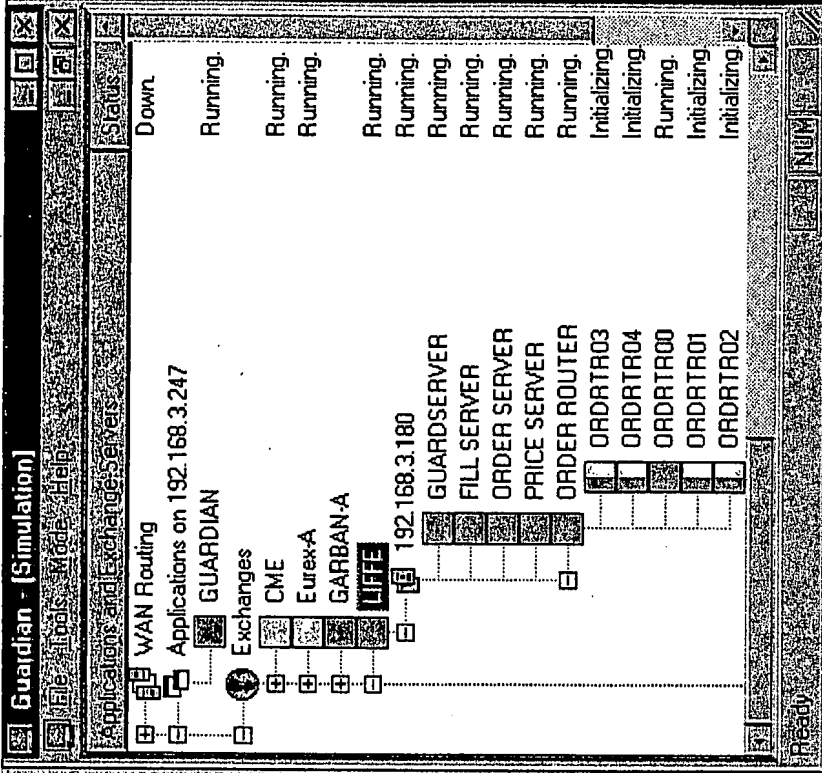
The screenshot displays the X-Trader software interface with several windows open:

- Product Group Information:** A window for configuring product groups with fields for Name, Symbol, and various quoting options like 'Auto Quote' and 'Minimum Spread'.
- Spread Tables:** A window for managing spread tables, including a table with columns for Name, Bid, Ask, and Spread, and buttons for 'Add/Remove Spread Tables', 'Add', 'Remove', and 'Copy'.
- Manual Fills:** A window for entering manual quotes, featuring dropdown menus for 'Exchange' (CME), 'Product' (AX), 'Expiration' (JUN00), and 'Product Type' (Future), along with input fields for 'Quantity' and 'Price'.
- Market Data:** A window showing a table of market data for 'LIFE B 3' with columns for Price, Qty, and Price. The table shows two entries: one at 109.04 with a quantity of 9, and another at 109.02 with a quantity of 5.
- Order Entry:** A window at the top with 'Buy' and 'Sell' buttons, and fields for 'GTD Limit' and 'RFQ Cost'.



**GUARDIAN** is a service that runs on all X\_TRADER workstations. It is the central point of communication between a local machine (a trader's workstation) and the TT Gateway (an exchange server). Guardian is also an administrative tool that may be used by a System Administrator on a trading or non-trading workstation to monitor the status of X\_TRADER and the TT Gateways.

Access X\_TRADER system on the local machine and TT Gateway.



The screenshot shows the 'TT Exchange Login - Trader (SIMULATION)' dialog box. It features a tabbed interface with 'Eurex', 'LIFE', and 'CME' tabs. The 'Eurex' tab is active, showing a list of exchange servers: Eurex, LIFE, and CME. Below the list are input fields for:

- Member Id: AAAAAA
- Group Id: BBBB
- Trader Id: 001
- Password: \*\*\*\*\*
- GUAR Member: [Empty]
- Default Account: [Empty]
- Prod Server: 192.1.23.10

Buttons for 'Login', 'Change Password', and 'Close' are located at the bottom.

The screenshot shows a warning dialog box titled 'Guardian'. The message reads: 'All log files have been collected. You can email them to trading@tradingtechnologies.com'. Below the message are the following details:

- Log: C:\WIN\LogFiles\192.168.3.247\_06/01/2000\_01zip
- Email: support@tradingtechnologies.com

An 'OK' button is located at the bottom right of the dialog.

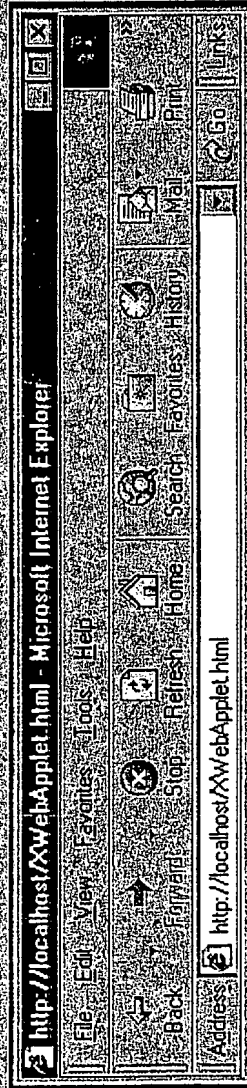
Guardian will also zip all relevant local logs and configuration files for easy transfer of data to remote technical support staff.


**X TRADER WEB** provides a browser based real-time professional Internet trading tool with the following features and advantages:

**Security** -- 128-bit encryption order encryption for your exchanges.

**Scalability** -- Easily and quickly increase the number of users by simply adding machines eliminating expensive software changes

**Multiple Exchanges** -- You can extend your electronic trading system beyond your intranet, to your partners on the Internet. Your trading partners no longer have to reside on the same LAN to trade through your brokerage.





**TRADING TECHNOLOGIES**

UserName:

Password:

Keyfile:

Server:

Proxy Server:

---

Exchanges

- TTSim (TTSIM-A Gateway)
- Futures
- A-C
- D-F
- J-L
- M-O
- P-R
- S-U
- V-X
- Y-Z
- 0-9
- Options
- Stocks
- Bonds

Exchange	Type	Symbol	Description	Expiration	Call/Put	Strike
TTSim	<input checked="" type="checkbox"/>	GE		Feb 01		
TTSim	<input checked="" type="checkbox"/>	GM		Nov 00		
TTSim	<input checked="" type="checkbox"/>	HD		Jan 01		
TTSim	<input checked="" type="checkbox"/>	HON		Dec 00		
TTSim	<input checked="" type="checkbox"/>	HON		Jan 01		
TTSim	<input checked="" type="checkbox"/>	HWP		Oct 00		
TTSim	<input checked="" type="checkbox"/>	IBM		Nov 00		
TTSim	<input checked="" type="checkbox"/>	IBM		Dec 00		
TTSim	<input checked="" type="checkbox"/>	IBM		Jan 01		
TTSim	<input checked="" type="checkbox"/>	INTC		Nov 00		

Apple II/III/IV

Market Window

Exchange: TTSim Symbol: Description: Expiration: Call/Put: Strike: Bid Price: Ask Price: Bid Quantity: Ask Quantity

TTSim 100 x 57.75 TTSim MCD Jan 01 GTD Limit MV

Order Book

Working Orders for guest before Aug 21, 2000, 11:59:59 PM

Order Form

Order ID: 1000001

User Name: guest

Customer Account: MV

Limit: 50

Min Vol: 50

100 57.75

Buy Sell

Depth Window - TTSim INTFC Nov 00

Accum. Bid Quantity	Avg. Bid Price	Bid Quantity	Bid Price	Ask Price	Ask Quantity	Avg. Ask Price	Ask Quantity	Accum. Ask Quantity
400	136.53	400	136.54	300				
1915	136.5271	1515	136.52	136.55	25	136.5408	375	
1955	136.5216	40	136.50					
2255	136.5148	300	136.47					
2469	136.3195	214	134.25					

Market Window

Exchange: TTSim Symbol: Description: Expiration: Call/Put: Strike: Bid Price: Ask Price: Bid Quantity: Ask Quantity

TTSim 100 x 57.75 TTSim MCD Jan 01 GTD Limit MV

Order Book

Working Orders for guest before Aug 21, 2000, 11:59:59 PM

Order Form

Order ID: 1000001

User Name: guest

Customer Account: MV

Limit: 50

Min Vol: 50

100 57.75

Buy Sell

Depth Window - TTSim INTFC Nov 00

Accum. Bid Quantity	Avg. Bid Price	Bid Quantity	Bid Price	Ask Price	Ask Quantity	Avg. Ask Price	Ask Quantity	Accum. Ask Quantity
400	136.53	400	136.54	300				
1915	136.5271	1515	136.52	136.55	25	136.5408	375	
1955	136.5216	40	136.50					
2255	136.5148	300	136.47					
2469	136.3195	214	134.25					

Auth Trail

Mon Aug 21 08:31:55 CDT 2000 Logged in from chinloconnor (172.17.18.2)

Mon Aug 21 08:33:11 CDT 2000 Unable to place order. Order does not have a valid price.

Mon Aug 21 08:33:31 CDT 2000 Unable to place order. ORDER has been rejected.

com.itlux.UXException: ORDER has been rejected: Invalid Price

at weblogit.rmi.extensions.AbstractRequestSenderReceive(AbstractRequest.java:76)

at com.itlux.proxy.OrderBookProxyBeanEOLmpl\_WLStub.placeOrder(OrderBookProxy.java:48)

at com.itlux.proxy.OrderBookProxyBeanEOLmpl\_ServiceStub.placeOrder(OrderBookProxy.java:48)

at com.itlux.proxy.OrderBookProxy.placeOrder(OrderBookProxy.java:33)

at com.itlux.UXOrderImpl.place(UXOrderImpl.java:187)

at com.itlux.web.order.OrderFormXT.handleSellOrder(OrderForm.java:135)

at com.itlux.web.order.OrderFormXT.handleSellOrderCommand(OrderFormXT.java:86)

at javax.swing.AbstractButton.fireActionPerformed(Unknown Source)

at javax.swing.DefaultButtonModel.fireActionPerformed(Unknown Source)

at javax.swing.DefaultButtonModel.setPressed(Unknown Source)

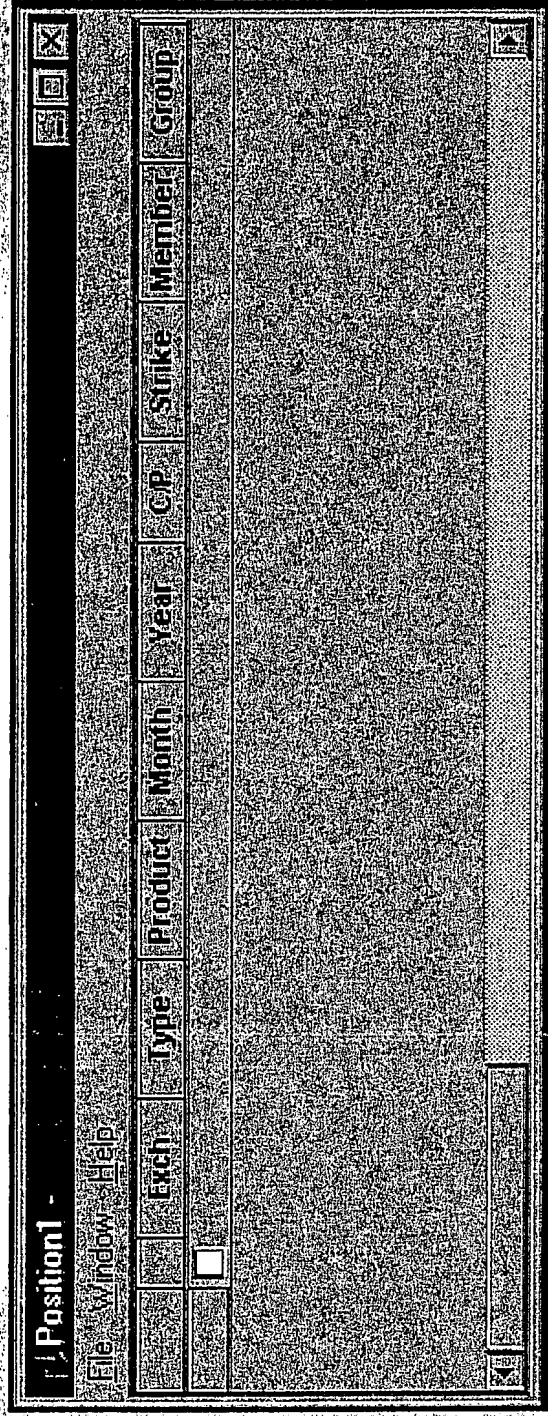
## X-TRADER WEB provides:

- Real time** -- Real time market and price updates, as well as direct order entry into electronic markets
- Internet Awareness** -- Internet connections that let you obtain a comprehensive view of the market even when you are away from the office
- Platform Independence** -- Your traders all have the same user interface, with no platform constraints
- Simple and Inexpensive Administration and Deployment** -- Thin client architecture that can be easily deployed and updated over the web
- Other Features** -- Common order book, support of up to 1,000,000 simultaneous users, and localization (user interface in different languages)

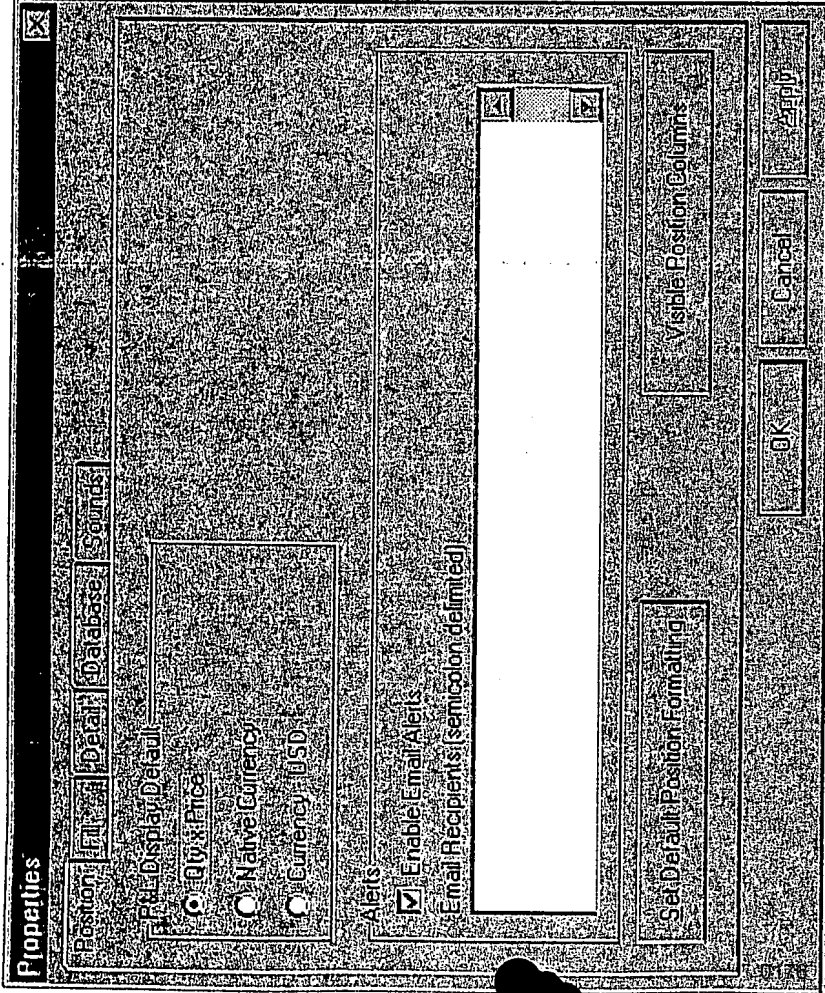
**X\_RISK** aggregates fills into a net position based on filters and the data range you select. This information updates dynamically as fills arrive. You can also enter trades manually, while receiving market updates and announcements. **X\_RISK** also lets you set alerts for various types of conditions, such as an alert threshold on P/L, or an alert limit on maximum position size.

You use **X\_RISK** to quantify the positions for which you manage risk. You can view positions several ways:  
Market (Exchange and Option Type)

- Product
- Expiration Month
- Expiration Year
- Member
- Trader
- Group
- Account
- Account type

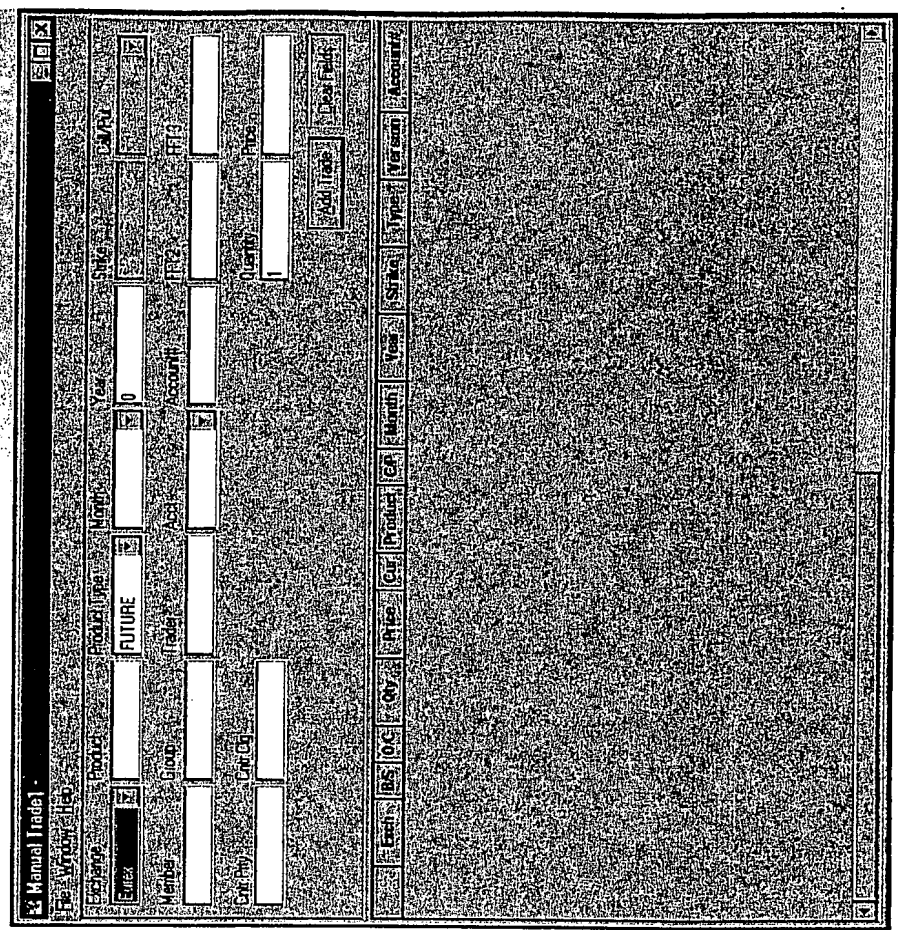


The **Position** window is the main window in **X\_RISK**. It lets you view the positions for which you manage risk. **X\_RISK** aggregates fills into a net position based on the filters and data range that you select. This information updates dynamically as fills arrive. **X\_RISK** stores all downloaded fills into a database and holds them so that you can generate reports. This database is also the source for fills that you can load into **X\_RISK**. You use date and time to indicate how far back you want fills and **X\_RISK** delivers the fills into the applications.



The **Manual Trades** window is used to view and enter new manual trades and to delete unwanted manual trades from your current position of filled trades. Fills for manual trades are added to the current net position in the position window where they apply. You can manually add or delete all orders executed through an alternate source. You can calculate your true position and P&L (profit/loss) when you use the **Manual Trades** feature.

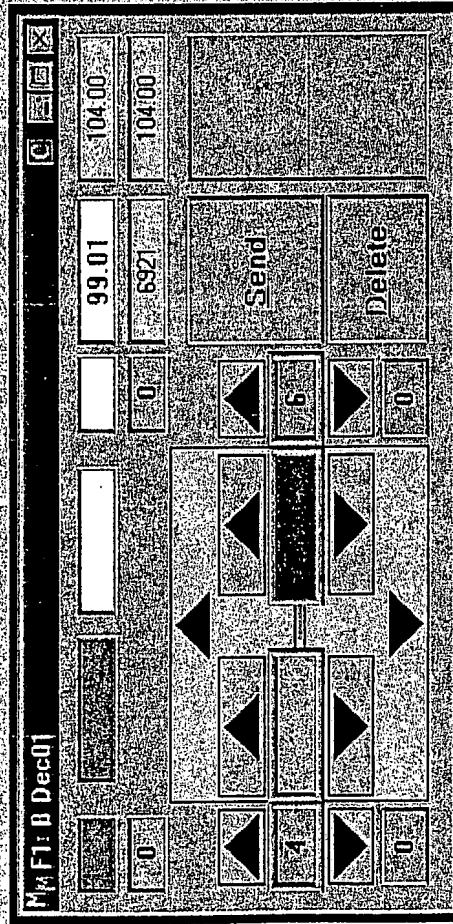
Use the tabs in this **Properties** dialog box to set up e-mail notification for alerts, change database connections, arrange to archive and purge fill records, hide and show columns for the various **X\_RISK** windows, select P/L display defaults, and select sounds for alerts.







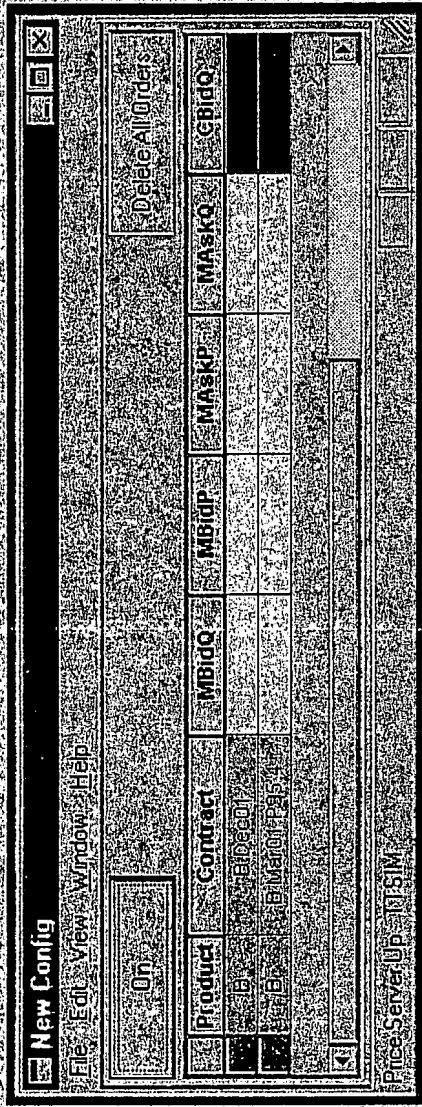
**X\_MARKETMAKER™** is an add-on tool to be used in conjunction with the **X\_TRADER Trading System™**. Designed to give you and your customers the best technological edge in the business, **X\_MARKETMAKER** provides you with a market making screen that allows you to enter two-sided markets with a single send command, as well as other market making features. Working with **X\_TRADER**, this tool will enhance your presence in all the world's open-access markets.



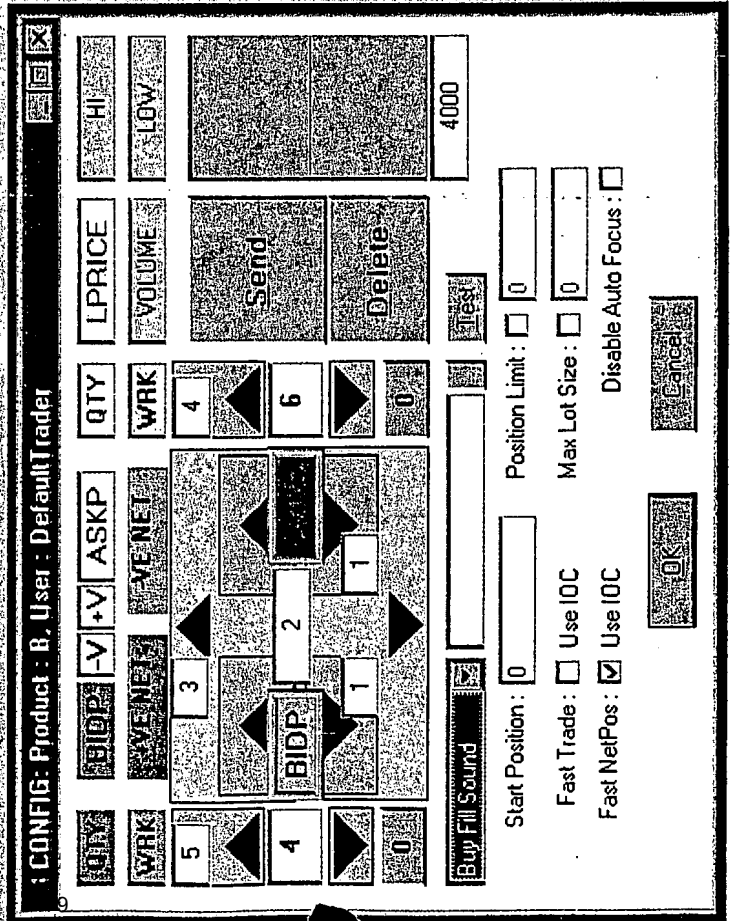
Trading for each product in **X\_MARKETMAKER** is done using the **Trading window**. One **X\_MARKETMAKER** Trading window is created for each product that appears on the Working Order Grid, allowing you to track multiple products during any one trading session.

Mkt Bid Qty	MM Work Buys	Mkt Bid Price	+Ve NetPos	Mkt Ask Price	-Ve NetPos	Mkt Ask Qty	MM Work Sells	Mkt Last Price	Mkt Volume	Mkt High	Mkt Low	Trend Graph
Req. Bid Qty	Req. Bid Price	Req. Ask Price	Req. Ask Qty	Req. Bid Price	Req. Ask Price	Req. Ask Qty	Zero Ask Qty					
Zero Bid Qty												

The **Working Order Grid** has a variety of column headings to identify the characteristics of the traded products. Use the mouse and the sliding bar at the bottom of the **Working Order Grid** to expose the column headings or resize the screen for an expanded view.



The net position in the **X\_MARKETMAKER** Trading window is indicated by the presence of a number that appears above the trading grid. Display of a number in either field is contingent on market position at the time. The two fields are identified as **+Ve Net Pos** and **-Ve Net Pos** respectively and, depending on the market position, only one or the other is visible at any one time.



# The TT Exchange Market How the Market Works

The TTX supports the ability to be several markets. That is, the TTX is able to present several markets, each with a unique exchange (market) name. This is useful for the presentation of simulation markets, or dividing products into separate markets for reasons of organization and/or security.

The architecture is an Oracle database serving as the market, and a TT GW front end to present an interface into the market. Matching occurs in the database via a trigger, which is easily modifiable on a per-product and/or per-member basis, even by the end customer administrator.

TTX Administration

File Edit View Help

TTX Administration

Exchanges

HM

Members

Orders

Schedule

Manual Gr

Currencies

Expiration	Active	Manual Grp	Base Curre	Tick	Round Lot	Update Price	Cover Read	Allow Stop	Allow IOC	Price Reason	Qty Reason
	<input checked="" type="checkbox"/>	<None >	US - U.S. D...	0.01	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<None >	0
	<input checked="" type="checkbox"/>	<None >	US - U.S. D...	0.01	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<None >	0
	<input checked="" type="checkbox"/>	LME	US - U.S. D...	0.01	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<None >	0
	<input checked="" type="checkbox"/>	LME	US - U.S. D...	0.01	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<None >	0
	<input checked="" type="checkbox"/>	<None >	US - U.S. D...	0.1	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<None >	0
	<input checked="" type="checkbox"/>	<None >	US - U.S. D...	0.1	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<None >	0
	<input checked="" type="checkbox"/>	<None >	US - U.S. D...	0.1	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<None >	0

TTX Administration

File Edit View Help

TTX Administration

Exchanges

HM

Members

Orders

Schedule

Manual Gr

Currencies

ID	Symbol	Name	Item Key	Match Type	Update Price	Cover Read	Allow Stop	Allow IOC
32	Cu 0615	Copper (Ex...	CU2345	FIFO	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
33	Cu 0915	Copper (Ex...	CU3456	FIFO	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
34	Cu 1215	Copper (Ex...	CU4567	FIFO	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
35	Sn 0615	Tin (Expire...	SN5438	FIFO	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
36	Sn 0915	Tin (Expire...	SN6543	FIFO	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
37	Sn 1215	Tin (Expire...	SN7654	Manual	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
42	FRA 36	Forward R...	FRA1234	FIFO	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
43	FRA 69	Forward R...	FRA2345	FIFO	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
44	FRA 912	Forward R...	FRA32	FIFO	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

TTX Administration

File Edit View Help

TTX Administration

Exchanges

HM

Members

Orders

Schedule

Manual Gr

Currencies

ID	Symbol	Name	Item Key	Match Type	Update Price	Cover Read	Allow Stop	Allow IOC	Price Reason	Qty Reason	TT Price	Type	TT Prod	Gr
	<None >	US - U.S. D...	0	1	<None >	0	<None >	<None >	<None >	0	0	Stock	N/A	
	<None >	US - U.S. D...	0	1	<None >	0	<None >	<None >	<None >	0	0	Stock	N/A	
	LME	US - U.S. D...	0	1	<None >	0	<None >	<None >	<None >	0	0	Stock	N/A	
	LME	US - U.S. D...	0	1	<None >	0	<None >	<None >	<None >	0	0	Stock	N/A	
	<None >	US - U.S. D...	0	1	<None >	0	<None >	<None >	<None >	0	0	Stock	N/A	
	<None >	US - U.S. D...	0	1	<None >	0	<None >	<None >	<None >	0	0	Future	Index Future	
	<None >	US - U.S. D...	0	1	<None >	0	<None >	<None >	<None >	0	0	Future	Index Future	
	<None >	US - U.S. D...	0	1	<None >	0	<None >	<None >	<None >	0	0	Future	Index Future	

# Client Applications

TT EXCHANGE can be accessed via any TTA API client application. This includes, but is not limited to, X\_TRADER, X\_TRADER WEB, X\_RISK, X\_QUOTE, X\_MARKET MAKER and X\_FILE.

TT EXCHANGE includes GUI interfaces for administrative functions. In addition to access via X\_TRADER WEB, TT EXCHANGE has its own web-enabled client application. This client for TTX is an HTML client using the HTTP protocol. The web interface facilitates basic trade operations: an order book, trade book (fill window), and audit trail, as well as the ability to receive price updates.

The back-end (business & scaling logic) of this application exists within TT EXCHANGE (the db and/or GW) as opposed to the XTW application server.

01

TTX Administration

Exchanges  
 HM  
 Members  
 Orders  
 Schedule  
 Manual Cr  
 Currencies

ID	Name	Acct	Currency	Credit Limit	Credit Remaining
1	OREG	<input checked="" type="checkbox"/>	US - U.S. Dollar	31,000,000.00	309,365,515.54
2	NYSE MEMBER 2	<input checked="" type="checkbox"/>	US - U.S. Dollar	64,000,000.00	64,000,000.00
3	NYSE MEMBER 3	<input checked="" type="checkbox"/>	US - U.S. Dollar	37,000,000.00	37,000,000.00
4	NYSE MEMBER 4	<input checked="" type="checkbox"/>	US - U.S. Dollar	20,000.00	20,000.00
5	TAD	<input checked="" type="checkbox"/>	US - U.S. Dollar	64,000,000.00	63,987,856.16
26	HM MEMBER	<input checked="" type="checkbox"/>	US - U.S. Dollar	0.00	0.00
12	ECOCN	<input checked="" type="checkbox"/>	US - U.S. Dollar	0.00	0.00
13	ECOCN	<input checked="" type="checkbox"/>	US - U.S. Dollar	0.00	0.00

TTX Administration

Exchanges  
 HM  
 Items  
 Members  
 Orders  
 Schedule  
 Manual Cr  
 Currencies

Item Name	Item Description	Item Status
Copper (Expires 20000615)		<input type="checkbox"/>
Copper (Expires 20000915)		<input type="checkbox"/>
Copper (Expires 20000715)		<input type="checkbox"/>
Tin (Expires 20000615)		<input type="checkbox"/>
Tin (Expires 20000715)		<input type="checkbox"/>
Forward Rate Agreement		<input type="checkbox"/>
Forward Rate Agreement		<input type="checkbox"/>

# APPENDIX E

**MD\_TRADER™** is the software that is revolutionizing the electronic trading industry. It is the only electronic interface that enables trading directly from market activity.



- Enables users to anticipate and respond instantly to movements in the marketplace
- Guarantees trade execution at prices selected by the user
- Unique vertical display of market depth provides constant view of market activity
- Trading screen can reset automatically, so that market gaps are always visible
- One window views - working orders, fills and market depth

MD\_TRADER

view multiple products from multiple exchanges

Order Type	Quantity	Price
		71070
<Default>		71065
32459		71060
6		71055
1		71050
1	5	71045
10	20	71040
50	100	71035
CLR		71030
1		71025
<input type="checkbox"/> IOC	8	71020
Del All	4	71015
Del Bids	9	71010
Del Offers	13	71005
	108	71000
Trade Out	6	70995
		70990
Patent Pending		70985

static price display guarantees the price you click is what you send

single-click trading

default quantity

single-click delete

sweep the book capability

single-click delete

extended market depth emphasizes liquidity and movement

Order ID	Exec	TT Status	Product	BS	Qty	MMVY	Price	Type	Time	Exp	Wk	Wk	Wk	Wk	Order No
123	OME	Working	FDAX	8	10	152925	Limit	OTC	2005-10-10	13570	0032701800354				
124	OME	Working	FDAX	8	10	152925	Limit	OTC	2005-10-10	13570	0032701800354				
25	Limit	Working	ELT	8	100	88.14	Limit	OTD	2005-10-10	13570	0710022700000				
26	TTSM	Working	FDAX	8	10	152925	Limit	OTC	2005-10-10	13570	0032701800354				
27	TTSM	Working	FDAX	8	10	152925	Limit	OTC	2005-10-10	13570	0032701800354				
28	TTSM	Working	FDAX	8	10	152925	Limit	OTC	2005-10-10	13570	0032701800354				
29	TTSM	Working	FDAX	8	10	152925	Limit	OTC	2005-10-10	13570	0032701800354				
30	TTSM	Working	FDAX	8	10	152925	Limit	OTC	2005-10-10	13570	0032701800354				
31	TTSM	Working	FDAX	8	10	152925	Limit	OTC	2005-10-10	13570	0032701800354				
32	TTSM	Working	FDAX	8	10	152925	Limit	OTC	2005-10-10	13570	0032701800354				

filters partial fills

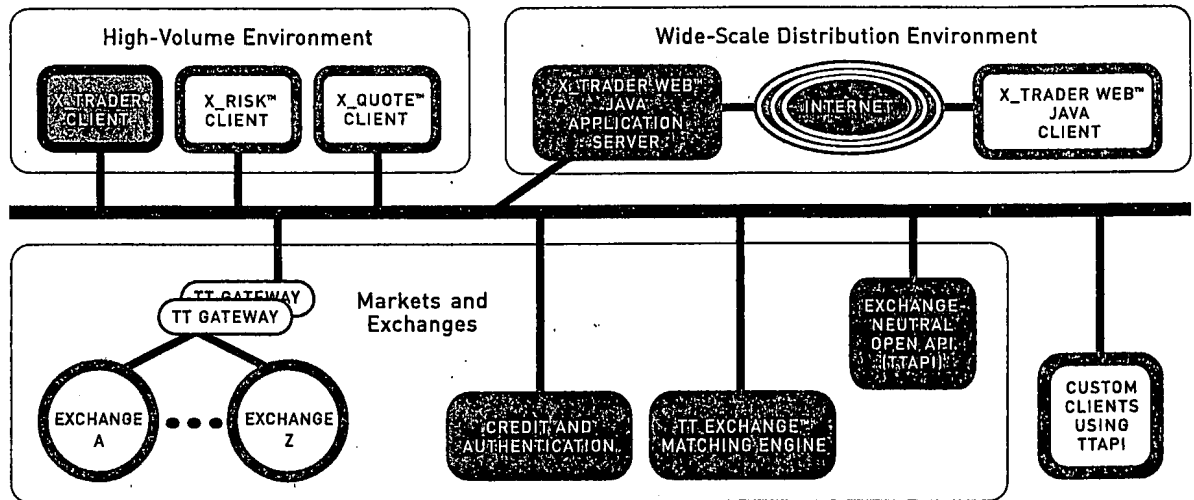
# Hardware Requirements

- 850 MHz or higher recommended, Intel 550 Hz minimum
- Windows NT workstation 4.0 or Windows 2000. For NT 4.0 use Service Packs 5, 6a (SP 6 is not recommended)
- 128 MB RAM minimum
- 1GB of available hard disk space for software and log files (EIDE sufficient, Ultra-wide SCSI or ultra-wide SCSI II recommended)
- Hard disks formatted using NTFS (file system)
- 10/100 Mb auto-switching network interface card
- CD-ROM and 1.44 MB floppy drives
- 21" color-8 plane color monitor, tested to 1600x1200
- For single monitor use, a 32 Mb AGP graphics card is recommended. A 16Mb PCI graphics card with 16 bit video depth is minimum. For multiple monitor use, an AGP graphics card with 32 Mb per monitor head is recommended.
- 3-button mouse to support middle button click trading with Microsoft Intellimouse (Intellipoint) software removed. A two-button mouse is supported, but Click and Dime trading are mutually exclusive.
- Tibco (included with TT software)

TRADING TECHNOLOGIES™

MID-TRADER™

## TT Product Suite



For additional information, please contact one of the following sales offices:

One World Trade Center  
86th Floor  
New York, NY 10048  
USA

100 South Wacker Drive  
Suite 1824  
Chicago, IL 60606  
USA

1603 Orrington Avenue  
Suite 1300  
Evanston, IL 60201  
USA

UK Ltd.  
36 Poultry  
London EC2R 8AJ

Bockenheimer Landstrasse 39  
60325 Frankfurt  
Germany

Phone +1.212.313.5300

Phone +1.312.372.3397

Phone +1.847.424.8844

Phone +44.20.7600.2121

Phone +49.69.138.726.0

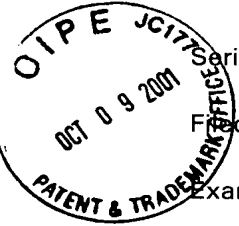
0183

SALES@TRADINGTECHNOLOGIES.COM

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Attorney Docket No. 024051/0135

Applicant: Gary Alan KEMP II, et al.  
Title: CLICK BASED TRADING WITH MARKET DEPTH DISPLAY  
Serial No.: 09/590,692  
Filed: June 9, 2000  
Examiner: Weisberger, R.  
Art Unit: 2164



#11  
S. Carter  
10-12-01

PETITION FOR EXTENSION OF TIME  
UNDER 37 C.F.R. § 1.136

RECEIVED  
OCT 11 2001  
Technology Center 2100

Commissioner for Patents  
Washington, D.C. 20231

Sir:

It is respectfully requested that an extension of time for the period indicated below be granted in accordance with the provisions of 37 C.F.R. § 1.136 to take the action required in the application identified in caption, as reflected by the papers submitted herewith.

<input checked="" type="checkbox"/> First Month	\$110 (\$ 55)*
<input type="checkbox"/> Second Month	\$290 (\$145)*
<input type="checkbox"/> Third Month	\$520 (\$260)*
<input type="checkbox"/> Fourth Month	\$520 (\$260)*
<input type="checkbox"/> Fifth Month	\$520 (\$260)*

\*(Small Entity) TOTAL FEE: \$110.00

A check that is of an amount that includes the above Total Fee is attached. This amount is believed to be correct; however, the Commissioner is hereby authorized to charge any deficiency or credit any overpayment to Deposit Account No. 19-0741. If one or more (additional) extension(s) of time is/are required for the filing of this paper, such extension(s) is/are hereby expressly petitioned for and the Commissioner is authorized to charge the required fee to Deposit Account No. 19-0741.

~~10/10/2001 SZEWDIE1 00000052 09590692~~

~~02 FC:115 110.00 OP~~

OCTOBER 9, 2001

Respectfully submitted,

Ankur D. Shah  
Registration No. 41,514

Date  
Adjustment date: 12/17/2001 EEKUBAY1  
10/10/2001 SZEWDIE1 00000052 09590692  
02 FC:115 -110.00 OP

FOLEY & LARDNER  
Washington Harbour  
3000 K Street, N.W., Suite 500  
Washington, D.C. 20007-5109  
Telephone: (202) 672-5300  
Facsimile: (202) 672-5399

002.649222.1

12/17/2001 EEKUBAY1 00000002 09590692

01 FC:215 55.00 OP  
02 FC:203 243.00 OP

Refund Ref:  
12/17/2001 EEKUBAY1 0000112800  
CHECK Refund Total: \$298.00



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

GAO 2164  
\$

Attorney Docket No. 024051/0135

Applicant: Gary Alan KEMP II, et al.

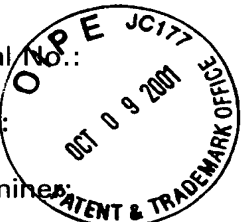
Title: CLICK BASED TRADING WITH MARKET DEPTH DISPLAY

Serial No.: 09/590,692

Filed: June 9, 2000

Examiner: Weisberger, R.

Art Unit: 2164



TRANSMITTAL

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OCT 11 2001  
Technology Center 2100

Commissioner for Patents  
Washington, D.C. 20231

Sir:

Transmitted herewith is an Amendment in the above-captioned application. The fee has been calculated as shown below. *(Small entity fees indicated in parentheses.)*

CLAIMS AS AMENDED						
(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Claims Remaining After Amendment		Highest Number Previously Paid For	Extra Claims	Rate	Fee
<b>Total Claims</b> <i>(Small Entity)</i>	67	-	40	27	18.00 <i>(9.00)</i>	<b>\$486.00</b>
<b>Independent claims</b> <i>(Small Entity)</i>	6	-	6	0	84.00 <i>(42.00)</i>	
<b>Multiple Dependent</b> <i>(Small Entity)</i>	0	-	0	0	280.00 <i>(140.00)</i>	
<b>Extension of Time</b>	<b>One Month</b>		<b>Two Months</b>	<b>Three Months</b>	<b>Four Months</b>	
<b>Fee</b> <i>(Small Entity)</i>	\$110 <i>(\$55)</i>		\$290 <i>(\$145)</i>	\$520 <i>(\$260)</i>	\$520 <i>(\$260)</i>	\$110.00
<b>Total</b>						<b>\$596.00</b>

A check in the amount of the above Total Fee is attached. This amount is believed to be correct; however, the Commissioner is hereby authorized to charge any deficiency or credit any overpayment to Deposit Account No. 19-0741.

Respectfully submitted,

Ankur D. Shah  
Registration No. 41,514

OCTOBER 9, 2001

Date

FOLEY & LARDNER  
Washington Harbour  
3000 K Street, N.W., Suite 500  
Washington, D.C. 20007-5109  
Telephone: (202) 672-5300  
Facsimile: (202) 672-5399



UNITED STATES PATENT AND TRADEMARK OFFICE

2164  
\$

Attorney Docket No. 024051/0135

H3

Applicant: Gary Alan KEMP II, et al.  
 Title: CLICK BASED TRADING WITH MARKET DEPTH DISPLAY  
 Serial No.: 09/590,692  
 Filed: June 9, 2000  
 Examiner: Weisberger, R.  
 Art Unit: 2164

RECEIVED  
 OCT 19 2001  
 Technology Center 2100

**INFORMATION DISCLOSURE STATEMENT  
 UNDER 37 CFR §1.56 and 37 CFR §1.97**

Commissioner for Patents  
 Washington, D.C. 20231

Sir:

Submitted herewith on Form PTO-1449 is a listing of documents known to Applicant in order to comply with Applicant's duty of disclosure pursuant to 37 CFR 1.56. A copy of each listed document is being submitted to comply with the provisions of 37 CFR 1.97 and 1.98.

The submission of any document herewith, which is not a statutory bar, is not intended as an admission that such document constitutes prior art against the claims of the present application or that such document is considered material to patentability as defined in 37 CFR §1.56(b). Applicant does not waive any rights to take any action which would be appropriate to antedate or otherwise remove as a competent reference any document which is determined to be a prima facie prior art reference against the claims of the present application.

10/18/2001 TGEDAMU1 00000048 09590692

01 FC:126

180.00 DP

002.653044.1

**TIMING OF THE DISCLOSURE**

The instant Information Disclosure Statement is being filed after the mailing date of a first Office action on the merits, but before the mailing date of a final Office Action or a notice of allowance. Accordingly, a certification or fee is required. Applicant is providing the fee as set forth in 37 C.F.R. 1.17(p) with the Information Disclosure Statement.

**RELEVANCE OF EACH DOCUMENT**

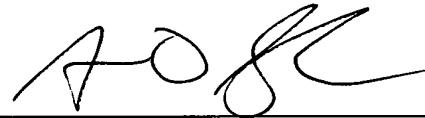
The listed documents are U.S. Patents and were found during searches conducted for applicant regarding other patent applications.

Applicants respectfully request that the listed documents be considered by the Examiner and formally be made of record in the present application and that an initialed copy of Form PTO-1449 be returned in accordance with MPEP §609.

Respectfully submitted,

OCTOBER 17, 2001

Date



Ankur D. Shah  
Registration No. 41,514

FOLEY & LARDNER  
Washington Harbour  
3000 K Street, N.W., Suite 500  
Washington, D.C. 20007-5109  
Telephone: (202) 672-5489  
Facsimile: (202) 672-5399



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

OFFICE OF FINANCE  
REFUND BRANCH

Attorney Docket No. 024051/0135

*Dep Ref*

Applicant: Gary Alan KEMP II, et al.

2001 NOV -9 PM 4: 23

*#14/ Req for Refund 12-17-01*

Title: CLICK BASED TRADING WITH INITIATIVE GRID DISPLAY OF MARKET DEPTH

Serial No.: 09/590,692

Filed: June 9, 2000

Examiner: Weisberger, R.

Art Unit: 2164

**REQUEST FOR REFUND**

Commissioner of Patents  
Washington, D.C. 20231

Sir:

Applicants respectfully requests a refund of \$298.00. Applicants filed a Petition for Extension of Time, along with a Reply on October 9, 2001, under the Large Entity fee in error. Applicants submitted a Small Entity Declaration on October 2, 2000.

Therefore, Applicant is entitled to a 50% refund of said fee, consistent with the Notice of the Acting Commissioner of Patents and Trademarks of February 15, 1983 (1027 OG 115).

The PTO is requested to make a refund in the form of a check in the amount of ~~\$298.00~~ forwarded to the undersigned at the address indicated below. This paper is being submitted in duplicate for the convenience of the Finance Branch.

Respectfully submitted,

*OCTOBER 26, 2001*

Date

Ankur D. Shah  
Registration No. 41,514

FOLEY & LARDNER  
Washington Harbour  
3000 K Street, N.W., Suite 500  
Washington, D.C. 20007-5109  
Telephone: (202) 672-5535  
Facsimile: (202) 672-5399



Best Available Copy

2164  
#

THE UNITED STATES PATENT AND TRADEMARK OFFICE

Attorney Docket No. 024051/0135

Applicant: Gary Alan KEMP II, et al.

Title: CLICK BASED TRADING WITH MARKET DEPTH DISPLAY

#16/100

Serial No.: 09/590,692

Filed: June 9, 2000

Examiner: Weisberger, R.

Art Unit: 2164

RECEIVED

MAR 18 2002

Technology Center 2100

**INFORMATION DISCLOSURE STATEMENT  
UNDER 37 CFR §1.56 and 37 CFR §1.97**

Commissioner for Patents  
Washington, D.C. 20231

Sir:

Submitted herewith on Form PTO-1449 is a documents known to Applicants in order to comply with Applicants' duty of disclosure pursuant to 37 CFR 1.56. A copy of each listed document is being submitted to comply with the provisions of 37 CFR 1.97 and 1.98.

The submission of any document herewith, which is not a statutory bar, is not intended as an admission that such document constitutes prior art against the claims of the present application or that such document is considered material to patentability as defined in 37 CFR §1.56(b). Applicants do not waive any rights to take any action which would be appropriate to antedate or otherwise remove as a competent reference any document which is determined to be a prima facie prior art reference against the claims of the present application.

03/15/2002 CVD111 09590692 180.00 DP  
01 FC:126

**TIMING OF THE DISCLOSURE**

The instant Information Disclosure Statement is being filed under 37 C.F.R. §1.97(c), after the mailing date of a first Office action on the merits, but before the mailing date of a final Office Action or a notice of allowance. Accordingly, a certification or fee is required.

**FEE**

A fee in the amount as set forth in 37 C.F.R. §1.17(p) is attached.

Applicants respectfully request that the listed documents be considered by the Examiner and formally be made of record in the present application and that an initialed copy of Form PTO-1449 be returned in accordance with MPEP §609.

Respectfully submitted,

*MARCH 12, 2002*



Date

Ankur D. Shah  
Registration No. 41,514

FOLEY & LARDNER  
Washington Harbour  
3000 K Street, N.W., Suite 500  
Washington, D.C. 20007-5109  
Telephone: (202) 672-5489  
Facsimile: (202) 672-5399

Should additional fees be necessary in connection with the filing of this paper, or if a petition for extension of time is required for timely acceptance of same, the Commissioner is hereby authorized to charge Deposit Account No. 19-0741 for any such fees; and applicant(s) hereby petition for any needed extension of time.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

7590 07/31/2002
WILLIAM T. ELLIS
FOLEY & LARDNER
3000 K STREET N.W.
SUITE 500
WASHINGTON, DC 20007-5109

Table with 2 columns: EXAMINER (WEISBERGER, RICHARD C), ART UNIT (3624), CLASS-SUBCLASS (705-037000)

DATE MAILED: 07/31/2002

Table with 5 columns: APPLICATION NO. (09/590,692), FILING DATE (06/09/2000), FIRST NAMED INVENTOR (Gary Allan Kemp II), ATTORNEY DOCKET NO. (024051/0135), CONFIRMATION NO. (2769)

TITLE OF INVENTION: CLICK BASED TRADING WITH INTUITIVE GRID DISPLAY OF MARKET DEPTH

Table with 6 columns: APPLN. TYPE (nonprovisional), SMALL ENTITY (YES), ISSUE FEE (\$640), PUBLICATION FEE (\$0), TOTAL FEE(S) DUE (\$640), DATE DUE (10/31/2002)

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE REFLECTS A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE APPLIED IN THIS APPLICATION. THE PTOL-85B (OR AN EQUIVALENT) MUST BE RETURNED WITHIN THIS PERIOD EVEN IF NO FEE IS DUE OR THE APPLICATION WILL BE REGARDED AS ABANDONED.

HOW TO REPLY TO THIS NOTICE:

- I. Review the SMALL ENTITY status shown above. If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:
A. If the status is changed, pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above and notify the United States Patent and Trademark Office of the change in status, or
B. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

If the SMALL ENTITY is shown as NO:

- A. Pay TOTAL FEE(S) DUE shown above, or
B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check the box below and enclose the PUBLICATION FEE and 1/2 the ISSUE FEE shown above.
[ ] Applicant claims SMALL ENTITY status. See 37 CFR 1.27.

II. PART B - FEE(S) TRANSMITTAL should be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). Even if the fee(s) have already been paid, Part B - Fee(s) Transmittal should be completed and returned. If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Box ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

**PART B - FEE(S) TRANSMITTAL**

**Complete and send this form, together with applicable fee(s), to: Mail Box ISSUE FEE  
Commissioner for Patents  
Washington, D.C. 20231  
Fax (703)746-4000**

**INSTRUCTIONS:** This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 4 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Legibly mark-up with any corrections or use Block 1)  
7590 07/31/2002

**WILLIAM T. ELLIS  
FOLEY & LARDNER  
3000 K STREET N.W.  
SUITE 500  
WASHINGTON, DC 20007-5109**

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

**Certificate of Mailing or Transmission**

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Box Issue Fee address above, or being facsimile transmitted to the USPTO, on the date indicated below.

_____ (Depositor's name)
_____ (Signature)
_____ (Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/590,692	06/09/2000	Gary Allan Kemp II	024051/0135	2769

TITLE OF INVENTION: CLICK BASED TRADING WITH INTUITIVE GRID DISPLAY OF MARKET DEPTH

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$640	\$0	\$640	10/31/2002

EXAMINER	ART UNIT	CLASS-SUBCLASS
WEISBERGER, RICHARD C	3624	705-037000

<p>1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).</p> <p><input type="checkbox"/> Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.</p> <p><input type="checkbox"/> "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. <b>Use of a Customer Number is required.</b></p>	<p>2. For printing on the patent front page, list (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.</p> <p>1 _____</p> <p>2 _____</p> <p>3 _____</p>
---	---

**3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)**

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. Inclusion of assignee data is only appropriate when an assignment has been previously submitted to the USPTO or is being submitted under separate cover. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE \_\_\_\_\_ (B) RESIDENCE: (CITY and STATE OR COUNTRY) \_\_\_\_\_

Please check the appropriate assignee category or categories (will not be printed on the patent)  individual  corporation or other private group entity  government

<p>4a. The following fee(s) are enclosed:</p> <p><input type="checkbox"/> Issue Fee</p> <p><input type="checkbox"/> Publication Fee</p> <p><input type="checkbox"/> Advance Order - # of Copies _____</p>	<p>4b. Payment of Fee(s):</p> <p><input type="checkbox"/> A check in the amount of the fee(s) is enclosed.</p> <p><input type="checkbox"/> Payment by credit card. Form PTO-2038 is attached.</p> <p><input type="checkbox"/> The Commissioner is hereby authorized by charge the required fee(s), or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).</p>
---	---

Commissioner for Patents is requested to apply the Issue Fee and Publication Fee (if any) or to re-apply any previously paid issue fee to the application identified above.

(Authorized Signature) \_\_\_\_\_ (Date) \_\_\_\_\_

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, D.C. 20231. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Washington, DC 20231.**

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

TRANSMIT THIS FORM WITH FEE(S)





UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/590,692	06/09/2000	Gary Allan Kemp II	024051/0135	2769

7590 07/31/2002  
WILLIAM T. ELLIS  
FOLEY & LARDNER  
3000 K STREET N.W.  
SUITE 500  
WASHINGTON, DC 20007-5109

EXAMINER

WEISBERGER, RICHARD C

ART UNIT PAPER NUMBER

3624

DATE MAILED: 07/31/2002

**Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)**  
(application filed on or after May 29, 2000)

The patent term adjustment to date is 95 days. If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the term adjustment will be 95 days.

If a continued prosecution application (CPA) was filed in the above-identified application, the filing date that determines patent term adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) system. (<http://pair.uspto.gov>)



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.
09/590,692 06/09/2000 Gary Allan Kemp II 024051/0135 2769

WILLIAM T. ELLIS
FOLEY & LARDNER
3000 K STREET N.W.
SUITE 500
WASHINGTON, DC 20007-5109
UNITED STATES

EXAMINER

WEISBERGER, RICHARD C

ART UNIT PAPER NUMBER

3624

DATE MAILED: 07/31/2002

Notice of Fee Increase on October 1, 2002

If a reply to a "Notice of Allowance and Fee(s) Due" is filed in the Office on or after October 1, 2002, then the amount due may be higher than that set forth in the "Notice of Allowance and Fee(s) Due" since there will be an increase in fees effective on October 1, 2002. See Revision of Patent and Trademark Fees for Fiscal Year 2003; Notice of Proposed Rulemaking, 67 Fed. Reg. 30634, 30636 (May 7, 2002).

If the issue fee paid is the amount shown on the "Notice of Allowance and Fee(s) Due," but not the correct amount in view of the fee increase, a "Notice to Pay Balance of Issue Fee" will be mailed to applicant. In order to avoid processing delays associated with mailing of a "Notice to Pay Balance of Issue Fee," if the response to the Notice of Allowance and Fee(s) due form is to be filed on or after October 1, 2002 (or mailed with a certificate of mailing on or after October 1, 2002), the issue fee paid should be the fee that is required at the time the fee is paid.

Effective October 1, 2002, 37 CFR 1.18 is proposed to be revised to change the patent issue fees as set forth below. As stated above, the final fees may be a different amount, and applicant should check the web site given above when paying the fee.

(a) Issue fee for issuing each original or reissue patent, except a design or plant patent:

By a small entity (Sec. 1.27(a))--\$655.00
By other than a small entity--\$1,310.00

(b) Issue fee for issuing a design patent:

By a small entity (Sec. 1.27(a))--\$235.00
By other than a small entity--\$470.00

(c) Issue fee for issuing a plant patent:

By a small entity (Sec. 1.27(a))--\$315.00
By other than a small entity--\$630.00

Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at (703) 305-8283.

# Notice of Allowability

Application No.

09/590,692

Examiner

Richard C Weisberger

Applicant(s)

KEMP ET AL.

Art Unit

2164

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

- 1.  This communication is responsive to amendment A.
- 2.  The allowed claim(s) is/are 22-70.
- 3.  The drawings filed on \_\_\_\_\_ are accepted by the Examiner.
- 4.  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a)  All   b)  Some\*   c)  None   of the:
    - 1.  Certified copies of the priority documents have been received.
    - 2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    - 3.  Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

- 5.  Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
  - (a)  The translation of the foreign language provisional application has been received.
- 6.  Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

- 7.  A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
- 8.  CORRECTED DRAWINGS must be submitted.
  - (a)  including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1)  hereto or 2)  to Paper No. \_\_\_\_\_.
  - (b)  including changes required by the proposed drawing correction filed \_\_\_\_\_, which has been approved by the Examiner.
  - (c)  including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. \_\_\_\_\_.

**Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the top margin (not the back) of each sheet. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.**

- 9.  DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

### Attachment(s)

- 1  Notice of References Cited (PTO-892)
- 2  Notice of Informal Patent Application (PTO-152)
- 3  Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 4  Interview Summary (PTO-413), Paper No. \_\_\_\_\_
- 5  Information Disclosure Statements (PTO-1449), Paper No. 1, 13
- 6  Examiner's Amendment/Comment *h*
- 7  Examiner's Comment Regarding Requirement for Deposit of Biological Material
- 8  Examiner's Statement of Reasons for Allowance
- 9  Other

#15/B

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Ankur Shah.

Nonelected claims 71-88 have been cancelled.


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.

PCT WO99/23099 is representative of the closest Foreign Patent prior art.

The closest US Patent prior art and Non Patent Literature prior art are of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."



Rich Weisberger

Senior Examiner

Patents of Business Methods of Banking and Finance

[Richard.Weisberger@Uspto.gov](mailto:Richard.Weisberger@Uspto.gov)

(703) 308 4408

**Notice of References Cited**

Application/Control No. 09/590,692	Applicant(s)/Patent Under Reexamination KEMP ET AL.	
Examiner Richard C Weisberger	Art Unit 3624	Page 1 of 1

**U.S. PATENT DOCUMENTS**

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
	A	US-			
	B	US-			
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

**FOREIGN PATENT DOCUMENTS**

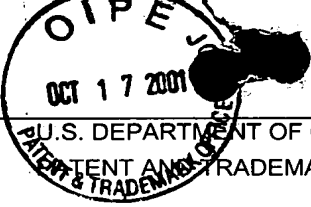
*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N	WO 99/30259	06-17-99	JP		
	O					
	P					
	Q					
	R					
	S					
	T					

**NON-PATENT DOCUMENTS**

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).) Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.





Form PTO-1449 (MODIFIED)

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

ATTY. DOCKET NO.

024051/0135

SERIAL NO.

09/590,692

INFORMATION DISCLOSURE CITATION

Date: October 17, 2001

(Use several sheets if necessary)

APPLICANT

Gary Alan KEMP II et al.

FILING DATE

June 9, 2000

GROUP ART UNIT

2164

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB-CLASS	FILING DATE IF APPROPRIATE
<i>[Handwritten]</i>	A1	5,038,284	08/06/1991	KRAMER	364	408	
<i>[Handwritten]</i>	A2	5,297,031	03/22/1994	GUTTERMAN et al.	364	408	
<i>[Handwritten]</i>	A3	5,689,651	11/18/1997	LOZMAN	395	237	
<i>[Handwritten]</i>	A4	5,774,877	06/30/1998	PATTERSON, JR. et al.	705	35	
<i>[Handwritten]</i>	A5	5,793,301	08/11/1998	PATTERSON, JR. et al.	340	825.26	
<i>[Handwritten]</i>	A6	5,797,002	08/18/1998	PATTERSON, JR. et al.	395	611	
<i>[Handwritten]</i>	A7	5,845,266	12/01/1998	LUPIEN et al.	705	37	
<i>[Handwritten]</i>	A8	5,915,245	06/22/1999	PATTERSON, JR. et al.	705	35	
<i>[Handwritten]</i>	A9	5,924,082	07/13/1999	SILVERMAN et al.	705	37	
<i>[Handwritten]</i>	A10	5,963,923	10/05/1999	GARBER	705	37	
<i>[Handwritten]</i>	A11	6,012,046	01/04/2000	LUPIEN et al.	705	37	
<i>[Handwritten]</i>	A12	6,014,643	01/11/2000	MINTON	705	37	
<i>[Handwritten]</i>	A13	6,098,051	08/01/2000	LUPIEN et al.	705	37	
<i>[Handwritten]</i>	A14	6,131,087	10/10/2000	LUKE et al.	705	26	
<i>[Handwritten]</i>	A15	6,134,535	10/17/2000	BELZBERG	705	37	
<i>[Handwritten]</i>	A16	6,195,647	02/27/2001	MARTYN et al.	705	37	
<i>[Handwritten]</i>	A17	6,272,474	08/07/2001	GARCIA	705	37	
<i>[Handwritten]</i>	A18	6,278,982	08/21/2001	KORHAMMER et al.	705	37	
<i>[Handwritten]</i>	A19	6,282,521	08/28/2001	HOWORKA	705	37	

RECEIVED OCT 19 2001 Technology Center 2100

FOREIGN PATENT DOCUMENTS

REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB-CLASS	TRANSLATION	
						YES	NO

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

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EXAMINER

*[Handwritten Signature]*

DATE CONSIDERED

*[Handwritten Date: 1/09/02]*

\* EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include any copy of this form with next communication to applicant.







**PART B - FEE(S) TRANSMITTAL**

Complete and send this form, together with applicable fee(s), to: **Mail Box ISSUE FEE**  
**Commissioner for Patents**  
**Washington, D.C. 20231**  
**Fax (703)746-4000**

**INSTRUCTIONS:** This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 4 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Legibly mark-up with any corrections or use Block 1)

7590 07/31/2002  
**WILLIAM T. ELLIS**  
**FOLEY & LARDNER**  
**3000 K STREET N.W.**  
**SUITE 500**  
**WASHINGTON, DC 20007-5109**



Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

**Certificate of Mailing or Transmission**

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Box Issue Fee address above, or being facsimile transmitted to the USPTO, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

09/590692

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/590,692	06/09/2000	Gary Allan Kemp II	024051/0135	2769

TITLE OF INVENTION: CLICK BASED TRADING WITH INTUITIVE GRID DISPLAY OF MARKET DEPTH

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$640	\$0	\$640	10/31/2002

EXAMINER	ART UNIT	CLASS-SUBCLASS
WEISBERGER, RICHARD C	3624	705-037000

<p>1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).</p> <p><input type="checkbox"/> Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.</p> <p><input type="checkbox"/> "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.</p>	<p>2. For printing on the patent front page, list (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.</p> <p>1. <u>FOLEY &amp; LARDNER</u></p> <p>2. _____</p> <p>3. _____</p>
--	---

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. Inclusion of assignee data is only appropriate when an assignment has been previously submitted to the USPTO or is being submitted under separate cover. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE **TRADING TECHNOLOGIES INTERNATIONAL INC.** (B) RESIDENCE: (CITY and STATE OR COUNTRY) **Chicago, Illinois**

Please check the appropriate assignee category or categories (will not be printed on the patent)  individual  corporation or other private group entity  government

4a. The following fee(s) are enclosed:  Issue Fee  Publication Fee  Advance Order - # of Copies \_\_\_\_\_

4b. Payment of Fee(s):  A check in the amount of the fee(s) is enclosed.  Payment by credit card. Form PTO-2038 is attached.  The Commissioner is hereby authorized by charge the required fee(s), or credit any overpayment, to Deposit Account Number 19-0741 (enclose an extra copy of this form).

Commissioner for Patents is requested to apply the Issue Fee and Publication Fee (if any) or to re-apply any previously paid issue fee to the application identified above.

(Authorized Signature) William T. Ellis, Reg. No. 26,874 (Date) 08/12/02

08/14/2002 BHUYEN2 00000107 09590692  
 01 FC:242 640.00 09

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

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Hm  
4  
09/590 692

# 17C  
10/24/02  
JA



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

**ATTORNEY DOCKET NO. 024051-0135**

Applicant: Gary Alan KEMP II et al.  
Title: CLICK BASED TRADING WITH INTUITIVE GRID DISPLAY OF MARKET DEPTH  
Appl. No.: 09/590,692  
Filing Date: 06/09/2000  
Examiner: R. Weisberger  
Art Unit: 3624  
Batch No.: 2769

**AMENDMENT AND REQUEST FOR RECONSIDERATION UNDER 37 CFR 1.312(a)**

Commissioner for Patents  
Washington, D.C. 20231

Sir:

Prior to issuance please amend the above-identified application as follows:

**IN THE SPECIFICATION:**

On page 8, delete the 3<sup>rd</sup> full paragraph, and replace this paragraph with the following in accordance with 37 C.F.R. §1.121. A marked up version showing the changes is attached:

Figure 2 illustrates a screen display of an invention described in a commonly owned co-pending application entitled "Click Based Trading with Market Depth Display" serial no. 09/589,751, filed on June 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

C1

Appl. No. 09/590,692

*C1*  
*CONT*

(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.

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Appl. No. 09/590,692

**REMARKS**

Applicants acknowledge that the present application was initially indicated by the Examiner to be in condition for allowance in January of 2002 and that, subsequently, the case was subjected to a quality assurance review at the U.S.P.T.O. and that the allowance of the claims was maintained without the need for claim amendments.

A Notice of Allowance has now been received in the above-identified application but the issue fee has not, as yet, been paid. Applicants submit that no new matter has been added and no new issues are raised by these amendments and that these amendments do not alter or vary the scope of the claims. Accordingly, these amendments do not require any additional search efforts nor any additional examination by the Examiner. Indeed, these amendments were discussed with the Examiner who identified the need to "fill-in the blanks" with the actual serial number and filing date. Entry of these amendments is respectfully requested.

Respectfully submitted,



\_\_\_\_\_  
Ankur D. Shah  
Attorney for Applicant  
Registration No. 41,514

August 12, 2002  
Date

FOLEY & LARDNER  
Customer Number: 22428



22428

PATENT TRADEMARK OFFICE

Telephone: (202) 672-5300  
Facsimile: (202) 672-5399

**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

Figure 2 illustrates a screen display of an invention described in a commonly owned co-pending application entitled "Click Based Trading with Market Depth Display" serial no. [ ] 09/589,751, filed on [ ] June 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.

#19  
JLG



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**  
**ATTORNEY DOCKET NO. 024051-0135**

Applicant: Gary Alan KEMP II et al.  
Title: CLICK BASED TRADING WITH INTUITIVE GRID DISPLAY OF MARKET DEPTH  
Appl. No.: 09/590,692  
Filing Date: 06/09/2000  
Examiner: R. Weisberger  
Art Unit: 3624  
Batch No.: 2769

**TRANSMITTAL OF FORMAL DRAWINGS**

Commissioner for Patents  
Washington, D.C. 20231

ATTENTION: DRAWING REVIEW BRANCH

Sir:

Transmitted herewith are the formal drawings (6 sheets, Figures 1-6) for the above-identified application. The Official Draftsperson is respectfully requested to approve these drawings for entry into the application.

Respectfully submitted,

Reg No 41514  
William T. Ellis  
Attorney for Applicant  
Registration No. 26,874

August 12, 2002  
Date

FOLEY & LARDNER  
Customer Number: 22428



22428

PATENT TRADEMARK OFFICE  
Telephone: (202) 672-5485  
Facsimile: (202) 672-5399

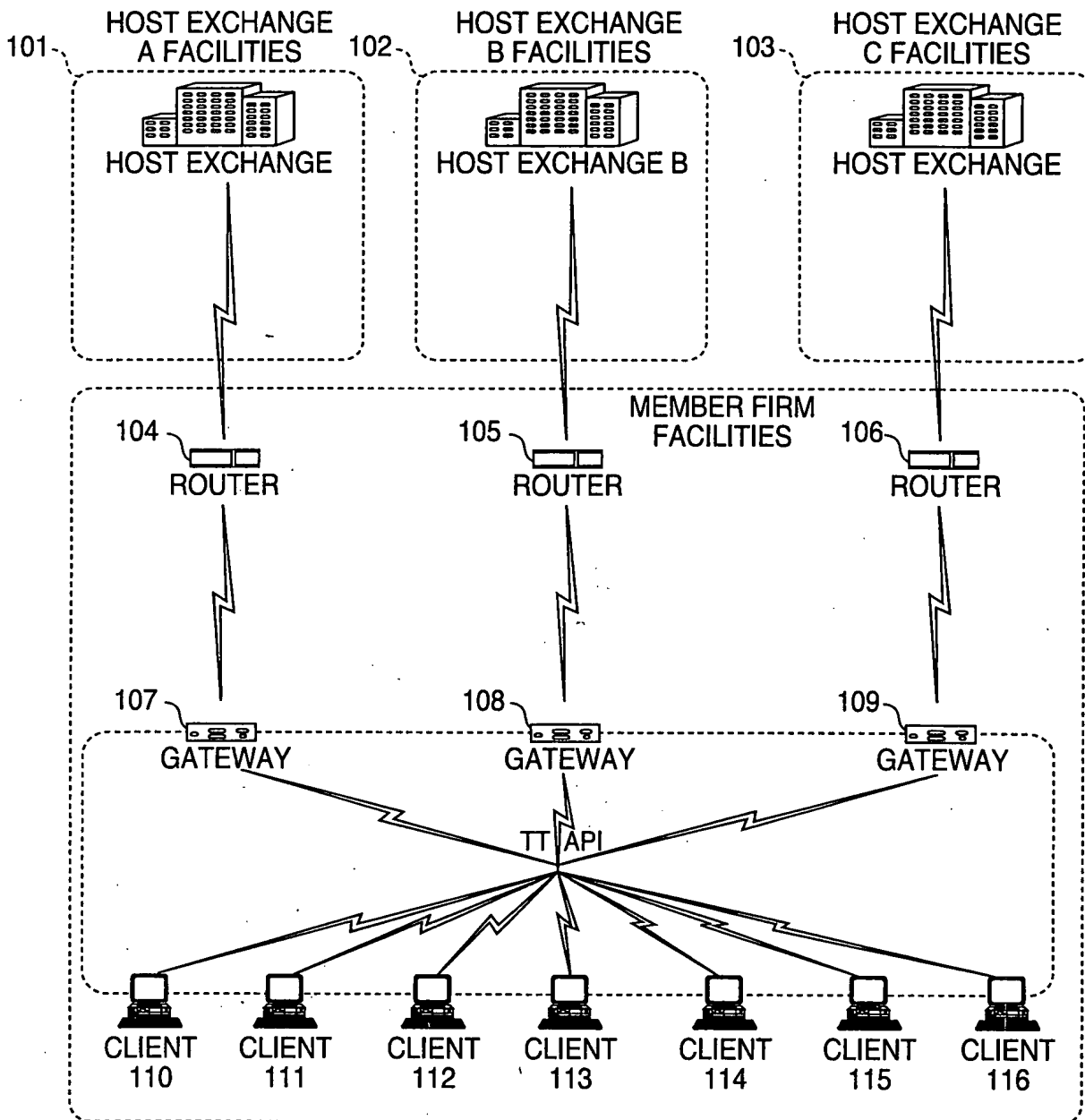


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FIG. 1

CONNECTION TO MULTIPLE EXCHANGES





**FIG. 2**

	201	202	203	204	205	
	Depth	BidQty	BidPrc	AskPrc	AskQty	Total
1	CDHO •	785	7626	7627	21	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"/>
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						<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						
S 10 W 14	1K	5H		63	93	10	} 1101	
	CLR		43		92			
	×	10	125		91			
	17	▼	97		90			
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			

**FIG. 5**



1206  
1205

1204

SYCOM FGBL DEC99						<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			
	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	<input type="checkbox"/>	<input type="checkbox"/>		30	87			
	NET 0			43	86			
B 0 W 17	NET REAL			110	85			
				23	84			
				31	83			
				125	82			
				21	81			

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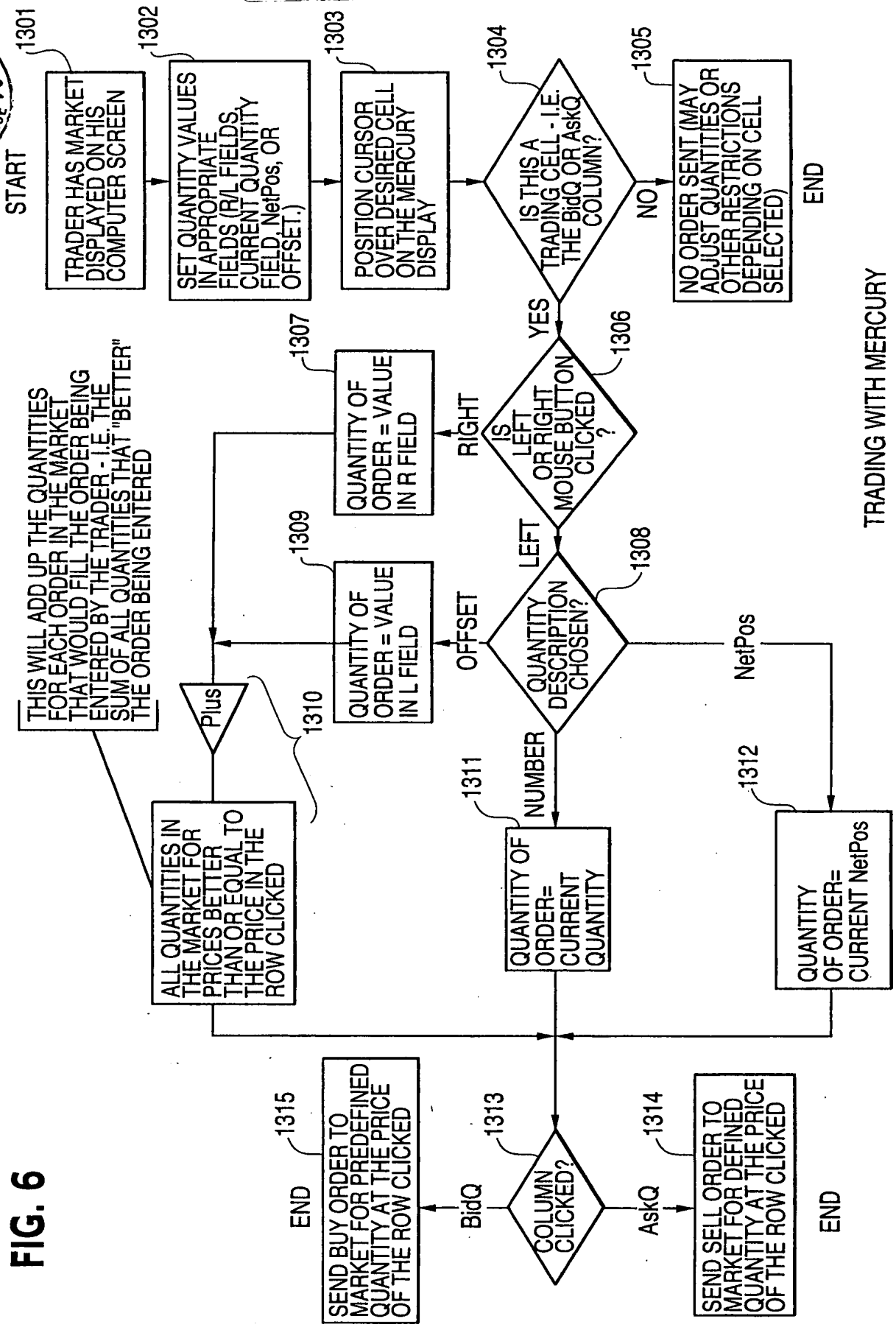


FIG. 6

TRADING WITH MERCURY

he a Dec

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

**ATTORNEY DOCKET NO. 024051-0135**

**Applicant:** Gary Alan KEMP II et al.

**Title:** CLICK BASED TRADING WITH INTUITIVE GRID DISPLAY OF MARKET DEPTH

**Appl. No.:** 09/590,692

**Filing Date:** 06/09/2000

**Examiner:** R. Weisberger

**Art Unit:** 3624

**Batch No.:** 2769

**TRANSMITTAL OF FORMAL DRAWINGS**

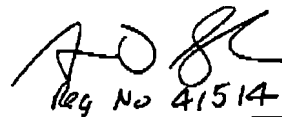
Commissioner for Patents  
Washington, D.C. 20231

**ATTENTION: DRAWING REVIEW BRANCH**

Sir:

Transmitted herewith are the formal drawings (6 sheets, Figures 1-6) of the above-identified application. The Official Draftsperson is respectfully requested to approve these drawings for entry into the application.

Respectfully submitted,



William T. Ellis  
Attorney for Applicant  
Registration No. 26,874

August 12, 2002

Date

FOLEY & LARDNER  
Customer Number: 22428



22428

PATENT TRADEMARK OFFICE

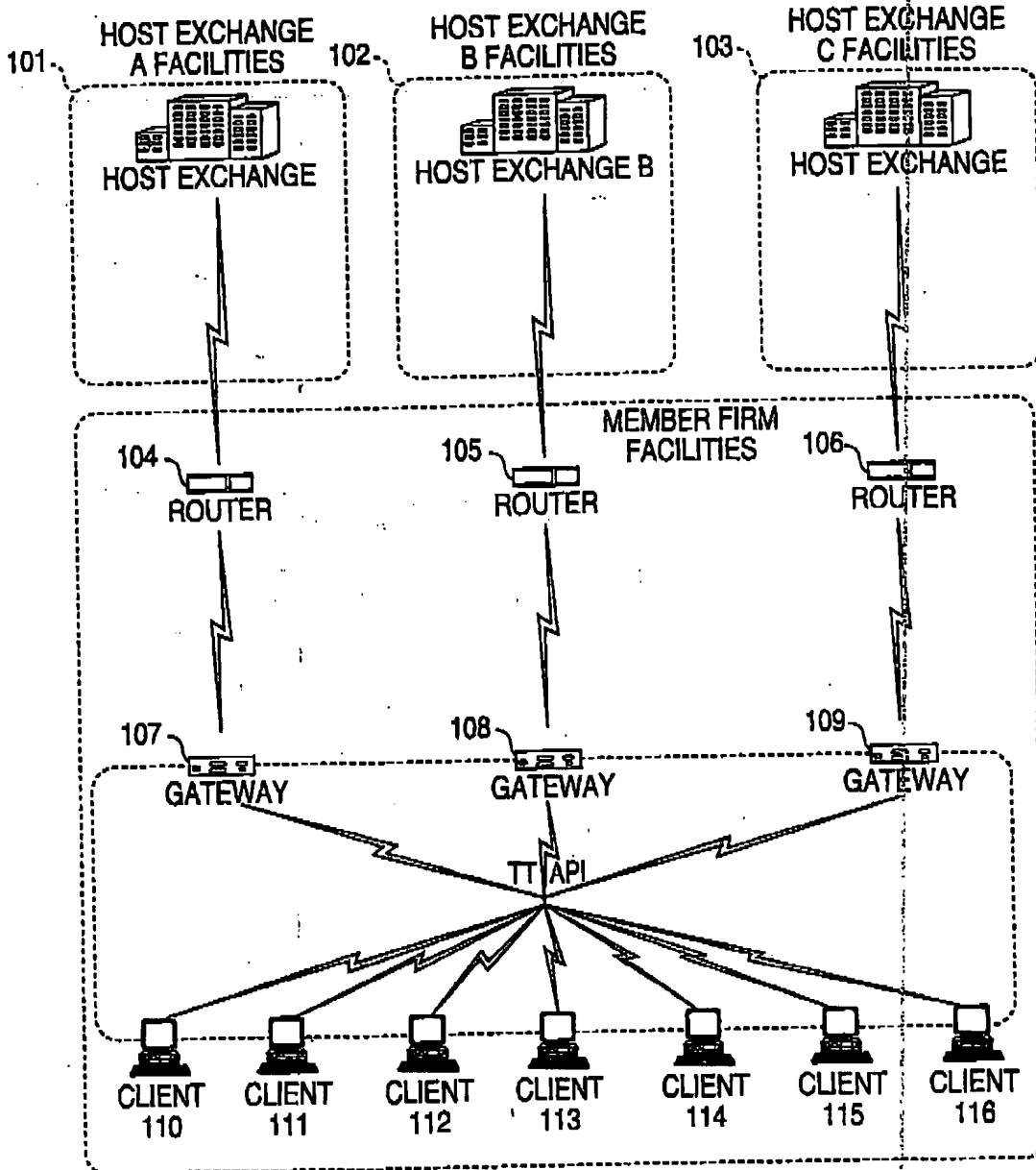
Telephone: (202) 672-5485

Facsimile: (202) 672-5399

Line on Doc. →

FIG. 1

CONNECTION TO MULTIPLE EXCHANGES





Line on Doc

FIG. 2

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

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FIG. 3

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

Line on Doc. →

**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	

1101

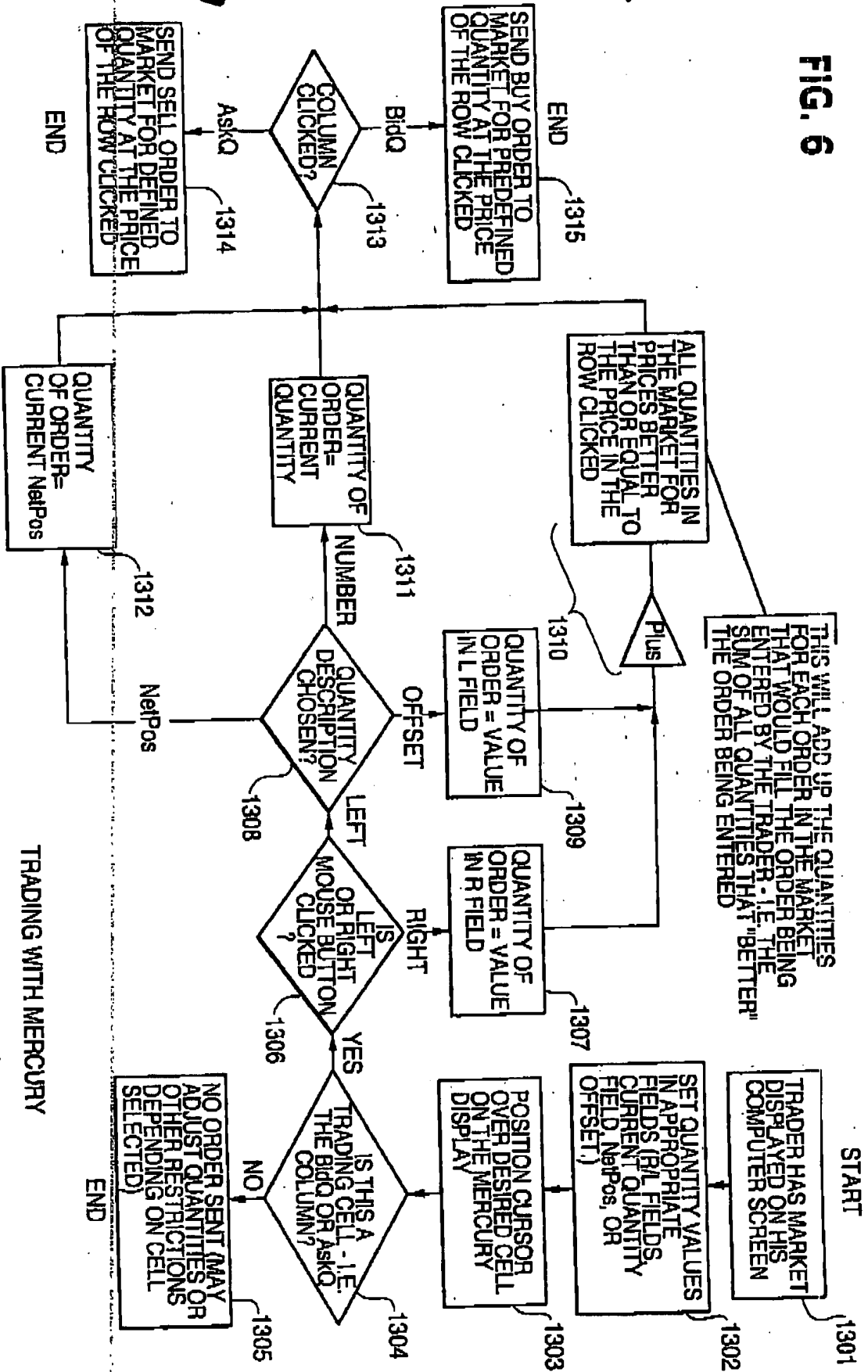
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FIG. 5

SYCOM FGBL DEC99						-	□	×
EW	10:48:44		BidQ	AskQ	Prc	LTQ		
	L	3		104	99			
1206	R	5		24	98			
1205	720			33	97			
	×	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			
	×	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			

1208
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FIG. 6



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PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail Box ISSUE FEE Commissioner for Patents Washington, D.C. 20231 Fax (703)746-4880

OK TO ENTER

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 4 should be completed where appropriate. All further correspondence including the Patent, Advantage orders and certification of correspondence fees will be mailed to the current correspondence address as indicated unless otherwise noted or directed otherwise in Block 1, by (x) specifying a new correspondence address; and/or (b) indicating a separate "ADDRESSES" for correspondence for the application.

WILLIAM T. ELLIS FOLEY & LARDNER 3000 K STREET N.W. SUITE 300 WASHINGTON, DC 20007-5109

Now: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmittal.

Certificate of Mailing or Transmittal I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the flow below (see address above, or being reasonable transmittal to the USPTO, on the date indicated below.

Form with fields for Depositor's name, Signature, Date

09/590,692 06/09/2000

Table with columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.

TITLE OF INVENTION: CLICK BASED TRADING WITH INTUITIVE GRID DISPLAY OF MARKET DEPTH

Table with columns: APPLN TYPE, SMALL ENTITY, ISSUE FEE, PUBLICATION FEE, TOTAL FEE(S) DUE, DATE DUE

Table with columns: EXAMINER, ART UNIT, CLASS/SUBCLASS

Form with sections 1 and 2 regarding change of correspondence address and printing on patent front page.

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type) PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. Inclusion of assignee data is only appropriate when an assignment has been previously submitted to the USPTO or is being submitted under separate cover.

(A) NAME OF ASSIGNOR (B) RESIDENCE: (CITY and STATE OR COUNTRY) TRADING TECHNOLOGIES INTERNATIONAL INC. Chicago, Illinois

Form with sections 4a and 4b regarding enclosed fees and payment methods.

Commissioner for Patents is requested to apply the Issue Fee and Publication Fee (if any) or to re-apply any previously paid issue fee to the application (identified above).

(Authorized Signature) William T. Ellis, Reg. No. 26,874 08/12/02

NOTE: This Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant, a registered attorney or agent, or the assignee or other party to whom it is shown by the records of the United States Patent and Trademark Office.

OK TO Enter

④ CW

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Duplicate of Paper #17/c

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**  
**ATTORNEY DOCKET NO. 024051-0135**

**Applicant:** Gary Alan KEMP II et al.  
**Title:** CLICK BASED TRADING WITH INTUITIVE GRID DISPLAY OF MARKET DEPTH  
**Appl. No.:** 09/580,692  
**Filing Date:** 06/09/2000  
**Examiner:** R. Weisberger  
**Art Unit:** 3824  
**Batch No.:** 2769

**AMENDMENT AND REQUEST FOR RECONSIDERATION  
UNDER 37 CFR 1.312(a)**

Commissioner for Patents  
Washington, D.C. 20231

Sir:

Prior to issuance please amend the above-identified application as follows:

**IN THE SPECIFICATION:**

On page 8, delete the 3<sup>rd</sup> full paragraph, and replace this paragraph with the following in accordance with 37 C.F.R. §1.121. A marked up version showing the changes is attached:

Figure 2 illustrates a screen display of an invention described in a commonly owned co-pending application entitled "Click Based Trading with Market Depth Display" serial no. 09/589,761, filed on June 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

*Line on Doc. →*

Appl. No. 09/590,892

(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.



Appl. No. 09/590,692

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**REMARKS**

Applicants acknowledge that the present application was initially indicated by the Examiner to be in condition for allowance in January of 2002 and that, subsequently, the case was subjected to a quality assurance review at the U.S.P.T.O. and that the allowance of the claims was maintained without the need for claim amendments.

A Notice of Allowance has now been received in the above-identified application but the issue fee has not, as yet, been paid. Applicants submit that no new matter has been added and no new issues are raised by these amendments and that these amendments do not alter or vary the scope of the claims. Accordingly, these amendments do not require any additional search efforts nor any additional examination by the Examiner. Indeed, these amendments were discussed with the Examiner who identified the need to "fill-in the blanks" with the actual serial number and filing date. Entry of these amendments is respectfully requested.

Respectfully submitted,



Ankur D. Shah  
Attorney for Applicant  
Registration No. 41,514

August 12, 2002  
Date

**FOLEY & LARDNER**  
Customer Number: 22428



22428

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Facsimile: (202) 672-5399

*Line 1 Ave →*

Appl. No. 09/580,692

**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

Figure 2 illustrates a screen display of an invention described in a commonly owned co-pending application entitled "Click Based Trading with Market Depth Display" serial no. [ ] 09/589,751, filed on [ ] June 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.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/590,692	06/09/2000	Gary Allan Kemp II	024051/0135	2769

7590 10/25/2002

WILLIAM T. ELLIS  
FOLEY & LARDNER  
3000 K STREET N.W.  
SUITE 500  
WASHINGTON, DC 20007-5109

EXAMINER

WEISBERGER, RICHARD C

ART UNIT PAPER NUMBER

3624

DATE MAILED: 10/25/2002

Please find below and/or attached an Office communication concerning this application or proceeding.



UNITED STATES DEPARTMENT OF COMMERCE  
 Patent and Trademark Office  
 Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
 Washington, D.C. 20231

APPLICATION NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
--------------------	-------------	-----------------------	---------------------

EXAMINER
----------

ART UNIT	PAPER NUMBER
----------	--------------

18

DATE MAILED:

**Response to Rule 312  
 Communication**

The petition filed \_\_\_\_\_ under 37 CFR 1.312(b) is granted. The paper has been forwarded to the examiner for consideration on the merits.

\_\_\_\_\_  
 Director,  
 Patent Examining Group \_\_\_\_\_

The amendment filed 08/12/02 under 37 CFR 1.312 has been considered, and has been:

- entered.
- entered as directed to matters of form not affecting the scope of the invention (Order 3311).
- disapproved. See explanation below.
- entered in part. See explanation below.

*Isaac Ahlman*

Publishing Division

#22

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Attorney Docket No. 024051/0135

Applicant: Gary Allan KEMP II et al.  
 Title: CLICK BASED TRADING WITH INTUITIVE GRID DISPLAY OF MARKET DEPTH  
 Serial No.: 09/590,692  
 Filed: June 9, 2000  
 Examiner: Weisberger, Richard C.  
 Art Unit: 3624  
 Allowed: July 31, 2002

RECEIVED  
 NOV 12 2002  
 OFFICE OF PETITIONS

**PETITION FOR WITHDRAWAL OF APPLICATION FROM ISSUE  
 UNDER 37 C.F.R. § 1.313(c)(2)**

Commissioner for Patents  
 Washington, D.C. 20231  
 ATTN: OFFICE OF PETITIONS

Sir:

**PETITION**

1. Applicant hereby petitions for the withdrawal of this application from issue.

**PATENT ISSUE FEE**

2. The issue fee for this case was paid on August 12, 2002. Applicant has been advised on November 12, 2002 by the Office of Petitions that sufficient time remains before the patent issue date to consider (and grant) this petition under 37 C.F.R. 1.313(c)(2).

**REASON FOR WITHDRAWAL**

3. Withdrawal from issue is required to permit consideration of a Request for Continued Examination in compliance with 37 C.F.R. §1.114 and

11/13/2002 AXELLEY 00000004 09306692  
 02 FC:1750 1.00.00 US

consideration of an Information Disclosure Statement under 37 C.F.R. §1.97, which have been filed concurrently herewith.

A check in the amount of \$130.00 to cover the filing fee is enclosed.

Respectfully submitted,



NOVEMBER 12, 2002

Date

Ankur D. Shah  
Registration No. 41,514

FOLEY & LARDNER  
Washington Harbour  
3000 K Street, N.W., Suite 500  
Washington, D.C. 20007-5109  
Telephone: (202) 672-5300  
Facsimile: (202) 672-5399

Should additional fees be necessary in connection with the filing of this paper, or if a petition for extension of time is required for timely acceptance of same, the Commissioner is hereby authorized to charge Deposit Account No. 19-0741 for any such fees, and applicant(s) hereby petition for any needed extension of time.

#21

Attorney Docket No. 024051/0135

Applicant: Gary Allan KEMP II et al.  
 Title: CLICK BASED TRADING WITH INTUITIVE GRID DISPLAY OF MARKET DEPTH  
 Serial No.: 09/590,692  
 Filed: June 9, 2000  
 Examiner: Weisberger, Richard C.  
 Art Unit: 3624  
 Allowed: July 31, 2002

**REQUEST FOR CONTINUED EXAMINATION (RCE)**  
**TRANSMITTAL**

Commissioner for Patents  
 Box RCE  
 Washington, D.C. 20231

RECEIVED  
 NOV 12 2002  
 OFFICE OF PETITIONS

Sir:

This is a Request for Continued Examination (RCE) under 37 C.F.R. § 1.114 of the above-identified application. This RCE and the enclosed items listed below are being filed prior to the earliest of: (1) payment of the issue fee (unless a petition under 37 C.F.R. § 1.313 is granted); (2) abandonment of the application; or (3) the filing of a notice of appeal to the U.S. Court of Appeals for the Federal Circuit under 35 U.S.C. §141, or the commencement of a civil action under 35 U.S.C. §145 or §146 (unless the appeal or civil action is terminated).

1. Submission required under 37 C.F.R. §1.114: (check items that apply)

a. Previously submitted:

- Please enter and consider the amendment/reply previously filed on \_\_\_\_.
- Please consider the Affidavit(s)/Declaration(s) previously filed on \_\_\_\_ but not considered.
- Please consider the arguments in the Appeal Brief or Reply Brief under 37 C.F.R. § 1.116 previously filed on \_\_\_\_.
- Other \_\_\_\_.

b. Enclosed are:

- Petition to Withdraw of Application from Issue under 37 C.F.R. § 1.313(c)(2).
- Information Disclosure Statement.
- Form PTO SB/08 with copies of 7 listed references.

Affidavit(s)/Declaration(s).

Other .

Miscellaneous:

Suspension of action of the above-identified application is requested under 37 C.F.R. § 1.103(c) for a period of \_\_\_ months.

The filing fee is calculated below:

	Claims as Amended	Previously Paid For	Extra Claims Present	Rate	Fee Totals
RCE Fee 1.17(e)				\$740.00	\$740.00
Total Claims:	67	67	0	x \$18.00	= \$0.00
Independents:	6	6	0	x \$84.00	= \$0.00
First presentation of any Multiple Dependent Claims:				+ \$280.00	= \$0.00
<b>CLAIMS FEE TOTAL:</b>					<b>= \$740.00</b>

Applicant hereby petitions for an extension of time under 37 C.F.R. §1.136(a) for the total number of months checked below:

<input type="checkbox"/>	Extension for response filed within the first month:	\$110.00	\$0.00
<input type="checkbox"/>	Extension for response filed within the second month:	\$400.00	\$0.00
<input type="checkbox"/>	Extension for response filed within the third month:	\$920.00	\$0.00
<input type="checkbox"/>	Extension for response filed within the fourth month:	\$1,440.00	\$0.00
<input type="checkbox"/>	Extension for response filed within the fifth month:	\$1,960.00	\$0.00
<b>EXTENSION FEE TOTAL:</b>			<b>\$0.00</b>
<b>CLAIMS AND EXTENSION FEE TOTAL:</b>			<b>\$740.00</b>
<input checked="" type="checkbox"/>	Small Entity Fees Apply (subtract ½ of above):		\$370.00
<input type="checkbox"/>	Suspension of action requested under 37 C.F.R. § 1.103(c)		\$0.00
<b>TOTAL FEE:</b>			<b>\$370.00</b>

A check in the amount of \$500.00 (\$130.00/Petition Fee & \$370.00/Filing Fee) is enclosed.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741.

**RECEIVED**  
NOV 12 2002  
OFFICE OF PETITIONS



Please direct all correspondence to the undersigned attorney or agent at the address indicated below.

Respectfully submitted,

NOVEMBER 12, 2002



---

Date

---

Ankur D. Shah  
Registration No. 41,514

FOLEY & LARDNER  
Washington Harbour  
3000 K Street, N.W., Suite 500  
Washington, D.C. 20007-5143  
Telephone: (202) 672-5300  
Facsimile: (202) 672-5399

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

**Attorney Docket No. 024051/0135**

Applicant: Gary Allan KEMP II et al.

#20

Title: CLICK BASED TRADING WITH INTUITIVE GRID DISPLAY OF  
MARKET DEPTH

Serial No.: 09/590,692

Filed: June 9, 2000

Examiner: Weisberger, Richard C.

Art Unit: 3624

Allowed: July 31, 2002

**INFORMATION DISCLOSURE STATEMENT  
UNDER 37 CFR §1.56 and 37 CFR §1.97**

**RECEIVED**

NOV 12 2002

OFFICE OF PETITIONS

Commissioner for Patents  
Washington, D.C. 20231

Sir:

Submitted herewith on Form PTO-SB/08 is a listing of documents known to Applicants in order to comply with Applicants' duty of disclosure pursuant to 37 CFR 1.56. A copy of each listed document is being submitted to comply with the provisions of 37 CFR 1.97 and 1.98. Both Silverman references were previously submitted with Applicants' Petition to Make Special, and Applicants believe the Silverman references are already of record in the application; however, in an abundance of caution Applicants are re-submitting the Silverman references on the enclosed Form PTO-SB/08. It is requested that the documents be given careful consideration and that they be cited of record in the prosecution history of the present application so that they will appear on the face of the patent issuing from the present application.

The submission of any document herewith, which is not a statutory bar, is not intended as an admission that such document constitutes prior art against

the claims of the present application or that such document is considered material to patentability as defined in 37 CFR §1.56(b). Applicants do not waive any rights to take any action which would be appropriate to antedate or otherwise remove as a competent reference any document which is determined to be a prima facie prior art reference against the claims of the present application.

Portions of the references may be material to the examination of the pending claims, however no such admission is intended. 37 C.F.R. 1.97 (h). The references have not been reviewed in sufficient detail to make any other representation and, in particular, no representation is intended as to the relative importance of any portion of the references.

#### **TIMING OF THE DISCLOSURE**

The instant Information Disclosure Statement is being filed in compliance with 37 C.F.R. §1.97(b) within three (3) months of the filing date of a request for continued examination (RCE) in the above-identified application.

Applicants respectfully request that the listed documents be considered by the Examiner and formally be made of record in the present application and that an initialed copy of Form PTO/SB/08 be returned in accordance with MPEP §609.

Respectfully submitted,

NOVEMBER 12, 2002

Date



Ankur D. Shah  
Registration No. 41,514

FOLEY & LARDNER  
Washington Harbour  
3000 K Street, N.W., Suite 500  
Washington, D.C. 20007-5143  
Telephone: (202) 672-5300  
Facsimile: (202) 672-5399

Should additional fees be necessary in connection with the filing of this paper, or if a petition for extension of time is required for timely acceptance of same, the Commissioner is hereby authorized to charge Deposit Account No. 19-0741 for any such fees, and applicant(s) hereby petition for any needed extension of time.

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Substitute for form 1449B/PTO <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  Date Submitted: November 12, 2002  <i>(use as many sheets as necessary)</i>	<b>Complete if Known</b> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Application Number</td><td>09/590,692</td></tr> <tr><td>Filing Date</td><td>06/09/2000</td></tr> <tr><td>First Named Inventor</td><td>Gary Allan Kemp II</td></tr> <tr><td>Group Art Unit</td><td>3624</td></tr> <tr><td>Examiner Name</td><td>R. Weisberger</td></tr> <tr><td>Attorney Docket Number</td><td>024051-0135</td></tr> </table>	Application Number	09/590,692	Filing Date	06/09/2000	First Named Inventor	Gary Allan Kemp II	Group Art Unit	3624	Examiner Name	R. Weisberger	Attorney Docket Number	024051-0135
Application Number	09/590,692												
Filing Date	06/09/2000												
First Named Inventor	Gary Allan Kemp II												
Group Art Unit	3624												
Examiner Name	R. Weisberger												
Attorney Docket Number	024051-0135												
Sheet 1 of 1													

**U.S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (if known)			
	A1	5,077,665		SILVERMAN et al.	12/31/1991	
	A2	5,136,501		SILVERMAN et al.	08/04/1992	
	A3	2002/0023038		FRITSCH et al.	02/21/2002	
	A4	6,408,282		BUIST	06/18/2002	

**FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Name of Patentee or Applicant of Cited Documents	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)				
	A5		WO 00/52619		PCT	09/08/2000		
	A6		WO 00/62187		PCT	10/19/2000		
	A7		WO 01/16852		PCT	03/08/2001		

**OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>6</sup>

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NOV 13 2002

GROUP 3600

Examiner Signature	Date Considered	
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> See attached Kinds of U.S. Patent Documents. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, D.C. 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, D.C. 20231.

Pet

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Attorney Docket No. 024051/0135

Applicant: Gary Allan KEMP II et al.

Title: CLICK BASED TRADING WITH INTUITIVE GRID DISPLAY OF MARKET DEPTH

Serial No.: 09/590,692

Filed: June 9, 2000

Examiner: Weisberger, Richard C.

Art Unit: 3624

Allowed: July 31, 2002

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TECHNOLOGY CENTER 3600  
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**PETITION FOR WITHDRAWAL OF APPLICATION FROM ISSUE  
UNDER 37 C.F.R. § 1.313(c)(2)**

Commissioner for Patents  
Washington, D.C. 20231  
ATTN: OFFICE OF PETITIONS

**RECEIVED**  
NOV 13 2002  
**GROUP 3600**

Sir:

**PETITION**

1. Applicant hereby petitions for the withdrawal of this application from issue.

**PATENT ISSUE FEE**

2. The issue fee for this case was paid on August 12, 2002. Applicant has been advised on November 12, 2002 by the Office of Petitions that sufficient time remains before the patent issue date to consider (and grant) this petition under 37 C.F.R. 1.313(c)(2).

**REASON FOR WITHDRAWAL**

3. Withdrawal from issue is required to permit consideration of a Request for Continued Examination in compliance with 37 C.F.R. §1.114 and

consideration of an Information Disclosure Statement under 37 C.F.R. §1.97, which have been filed concurrently herewith.

A check in the amount of \$130.00 to cover the filing fee is enclosed.

Respectfully submitted,



*NOVEMBER 12, 2002*

Date

Ankur D. Shah  
Registration No. 41,514

FOLEY & LARDNER  
Washington Harbour  
3000 K Street, N.W., Suite 500  
Washington, D.C. 20007-5109  
Telephone: (202) 672-5300  
Facsimile: (202) 672-5399

Should additional fees be necessary in connection with the filing of this paper, or if a petition for extension of time is required for timely acceptance of same, the Commissioner is hereby authorized to charge Deposit Account No. 19-0741 for any such fees, and applicant(s) hereby petition for any needed extension of time.

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

**Attorney Docket No. 024051/0135**

Applicant: Gary Allan KEMP II et al.  
Title: CLICK BASED TRADING WITH INTUITIVE GRID DISPLAY OF  
MARKET DEPTH  
Serial No.: 09/590,692  
Filed: June 9, 2000  
Examiner: Weisberger, Richard C.  
Art Unit: 3624  
Allowed: July 31, 2002

**INFORMATION DISCLOSURE STATEMENT  
UNDER 37 CFR §1.56 and 37 CFR §1.97**

Commissioner for Patents  
Washington, D.C. 20231

Sir:

Submitted herewith on Form PTO-SB/08 is a listing of documents known to Applicants in order to comply with Applicants' duty of disclosure pursuant to 37 CFR 1.56. A copy of each listed document is being submitted to comply with the provisions of 37 CFR 1.97 and 1.98. Both Silverman references were previously submitted with Applicants' Petition to Make Special, and Applicants believe the Silverman references are already of record in the application; however, in an abundance of caution Applicants are re-submitting the Silverman references on the enclosed Form PTO-SB/08. It is requested that the documents be given careful consideration and that they be cited of record in the prosecution history of the present application so that they will appear on the face of the patent issuing from the present application.

The submission of any document herewith, which is not a statutory bar, is not intended as an admission that such document constitutes prior art against



the claims of the present application or that such document is considered material to patentability as defined in 37 CFR §1.56(b). Applicants do not waive any rights to take any action which would be appropriate to antedate or otherwise remove as a competent reference any document which is determined to be a prima facie prior art reference against the claims of the present application.

Portions of the references may be material to the examination of the pending claims, however no such admission is intended. 37 C.F.R. 1.97 (h). The references have not been reviewed in sufficient detail to make any other representation and, in particular, no representation is intended as to the relative importance of any portion of the references.

#### **TIMING OF THE DISCLOSURE**

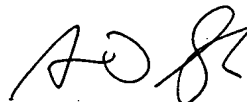
The instant Information Disclosure Statement is being filed in compliance with 37 C.F.R. §1.97(b) within three (3) months of the filing date of a request for continued examination (RCE) in the above-identified application.

Applicants respectfully request that the listed documents be considered by the Examiner and formally be made of record in the present application and that an initialed copy of Form PTO/SB/08 be returned in accordance with MPEP §609.

Respectfully submitted,

NOVEMBER 12, 2002

Date



Ankur D. Shah  
Registration No. 41,514

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Washington Harbour  
3000 K Street, N.W., Suite 500  
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Attorney Docket No. 024051/0135

Applicant: Gary Allan KEMP II et al.  
 Title: CLICK BASED TRADING WITH INTUITIVE GRID DISPLAY OF MARKET DEPTH  
 Serial No.: 09/590,692  
 Filed: June 9, 2000  
 Examiner: Weisberger, Richard C.  
 Art Unit: 3624  
 Allowed: July 31, 2002

**REQUEST FOR CONTINUED EXAMINATION (RCE)**  
**TRANSMITTAL**

Commissioner for Patents  
 Box RCE  
 Washington, D.C. 20231

Sir:

This is a Request for Continued Examination (RCE) under 37 C.F.R. § 1.114 of the above-identified application. This RCE and the enclosed items listed below are being filed prior to the earliest of: (1) payment of the issue fee (unless a petition under 37 C.F.R. § 1.313 is granted); (2) abandonment of the application; or (3) the filing of a notice of appeal to the U.S. Court of Appeals for the Federal Circuit under 35 U.S.C. §141, or the commencement of a civil action under 35 U.S.C. §145 or §146 (unless the appeal or civil action is terminated).

1. Submission required under 37 C.F.R. §1.114: (check items that apply)

a. Previously submitted:

- Please enter and consider the amendment/reply previously filed on \_\_\_\_.
- Please consider the Affidavit(s)/Declaration(s) previously filed on \_\_\_\_ but not considered.
- Please consider the arguments in the Appeal Brief or Reply Brief under 37 C.F.R. § 1.116 previously filed on \_\_\_\_.
- Other \_\_\_\_.

b. Enclosed are:

- Petition to Withdraw of Application from Issue under 37 C.F.R. § 1.313(c)(2).
- Information Disclosure Statement.
- Form PTO SB/08 with copies of 7 listed references.
- Amendment/Reply.

Affidavit(s)/Declaration(s).

Other .

Miscellaneous:

Suspension of action of the above-identified application is requested under 37 C.F.R. § 1.103(c) for a period of \_\_\_ months.

The filing fee is calculated below:

	Claims as Amended	Previously Paid For	Extra Claims Present	Rate	Fee Totals
RCE Fee 1.17(e)				\$740.00	\$740.00
Total Claims:	67	67	= 0	x \$18.00 =	\$0.00
Independents:	6	6	= 0	x \$84.00 =	\$0.00
First presentation of any Multiple Dependent Claims:				+ \$280.00 =	\$0.00
CLAIMS FEE TOTAL: =					\$740.00

Applicant hereby petitions for an extension of time under 37 C.F.R. § 1.136(a) for the total number of months checked below:

<input type="checkbox"/>	Extension for response filed within the first month:	\$110.00	\$0.00
<input type="checkbox"/>	Extension for response filed within the second month:	\$400.00	\$0.00
<input type="checkbox"/>	Extension for response filed within the third month:	\$920.00	\$0.00
<input type="checkbox"/>	Extension for response filed within the fourth month:	\$1,440.00	\$0.00
<input type="checkbox"/>	Extension for response filed within the fifth month:	\$1,960.00	\$0.00
EXTENSION FEE TOTAL:			\$0.00
CLAIMS AND EXTENSION FEE TOTAL:			\$740.00
<input checked="" type="checkbox"/>	Small Entity Fees Apply (subtract ½ of above):		\$370.00
<input type="checkbox"/>	Suspension of action requested under 37 C.F.R. § 1.103(c)		\$0.00
TOTAL FEE:			\$370.00

A check in the amount of \$500.00 (\$130.00/Petition Fee & \$370.00/Filing Fee) is enclosed.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741.

Please direct all correspondence to the undersigned attorney or agent at the address indicated below.

Respectfully submitted,

NOVEMBER 13, 2002



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Date

---

Ankur D. Shah  
Registration No. 41,514

FOLEY & LARDNER  
Washington Harbour  
3000 K Street, N.W., Suite 500  
Washington, D.C. 20007-5143  
Telephone: (202) 672-5300  
Facsimile: (202) 672-5399



UNITED STATES PATENT AND TRADEMARK OFFICE

Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office Washington, D.C. 20231 www.uspto.gov

Paper No. 23

WILLIAM T. ELLIS
FOLEY & LARDNER
3000 K STREET N.W.
SUITE 500
WASHINGTON, DC 20007-5109

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NOV 13 2002

OFFICE OF PETITIONS

ON PETITION

In re Application of
Gary Allan Kemp et al
Application No. 09/590,692
Filed: June 9, 2000
Attorney Docket No. 024051-0135

This is a decision on the petition, filed November 12, 2002, under 37 CFR 1.313(c)(2) to withdraw the above-identified application from issue after payment of the issue fee.

The petition is GRANTED.

The above-identified application is withdrawn from issue for consideration of a submission under 37 CFR 1.114 (request for continued examination). See 37 CFR 1.313(c)(2).

Petitioner is advised that the issue fee paid on August 12, 2002 in the above-identified application cannot be refunded. If, however, the above-identified application is again allowed, petitioner may request that it be applied towards the issue fee required by the new Notice of Allowance.1

Telephone inquiries should be directed to the undersigned at (703) 305-8859.

After receipt of the file in the Office of Petitions, the application will be forwarded to Technology Center AU 3624 for processing of the request for continued examination under 37 CFR 1.114.

Handwritten signature of Karen Creasy

Karen Creasy
Petitions Examiner
Office of Petitions
Office of the Deputy Commissioner
for Patent Examination Policy

1 The request to apply the issue fee to the new Notice must be made in writing and should be accompanied by the new Issue Fee Transmittal Form PTOL-85(b), along with a copy of this decision. Additionally, if the issue fee has increased from the previously paid issue fee, the balance due must be submitted. Failure to timely request in writing that the previously paid issue fee be applied towards the new Notice and payment of any balance due will result in the abandonment of the application.



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Attorney Docket No. 024051/0135

#24  
12/18/02

Applicant: Gary Allan KEMP II et al.  
Title: CLICK BASED TRADING WITH INTUITIVE GRID DISPLAY OF MARKET DEPTH  
Serial No.: 09/590,692  
Filed: June 9, 2000  
Examiner: Weisberger, Richard C.  
Art Unit: 3624

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DEC 19 2002  
GROUP 3600

**INFORMATION DISCLOSURE STATEMENT  
UNDER 37 CFR §1.56 and 37 CFR §1.97**

Commissioner for Patents  
Washington, D.C. 20231

Sir:

Submitted herewith on Form PTO-SB/08 is a listing of documents known to Applicants in order to comply with Applicants' duty of disclosure pursuant to 37 CFR 1.56. A copy of each listed document is being submitted to comply with the provisions of 37 CFR 1.97 and 1.98.

The submission of any document herewith, which is not a statutory bar, is not intended as an admission that such document constitutes prior art against the claims of the present application or that such document is considered material to patentability as defined in 37 CFR §1.56(b). Applicants do not waive any rights to take any action which would be appropriate to antedate or otherwise remove as a competent reference any document which is determined to be a prima facie prior art reference against the claims of the present application.

**TIMING OF THE DISCLOSURE**

The instant Information Disclosure Statement is being filed in compliance with 37 C.F.R. §1.97(b) within three (3) months of the filing date of a request for continued examination (RCE) in the above-identified application.

Applicants respectfully request that the listed documents be considered by the Examiner and formally be made of record in the present application and that an initialed copy of Form PTO/SB/08 be returned in accordance with MPEP §609.

Respectfully submitted,

DECEMBER 16, 2012

Date




Ankur D. Shah  
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Substitute for form 1449B/PTO <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> Date Submitted: December 18, 2002 (use as many sheets as necessary)	<b>Complete if Known</b> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>Application Number</td> <td>09/590,692</td> </tr> <tr> <td>Filing Date</td> <td>06/09/2000</td> </tr> <tr> <td>First Named Inventor</td> <td>Gary Allan Kemp II</td> </tr> <tr> <td>Group Art Unit</td> <td>3624</td> </tr> <tr> <td>Examiner Name</td> <td>R. Weisberger</td> </tr> <tr> <td>Attorney Docket Number</td> <td>024051-0135</td> </tr> </table>	Application Number	09/590,692	Filing Date	06/09/2000	First Named Inventor	Gary Allan Kemp II	Group Art Unit	3624	Examiner Name	R. Weisberger	Attorney Docket Number	024051-0135
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First Named Inventor	Gary Allan Kemp II												
Group Art Unit	3624												
Examiner Name	R. Weisberger												
Attorney Docket Number	024051-0135												
Sheet 1 of 1													

U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (if known)			
A	A1	2002/0055899		WILLIAMS	05/09/2002	

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FOREIGN PATENT DOCUMENTS								
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Name of Patentee or Applicant of Cited Documents	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)				

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>6</sup>

Examiner Signature		Date Considered	3/07
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> See attached Kinds of U.S. Patent Documents. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

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UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office  
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Washington, D.C. 20231

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CHANGE OF ADDRESS/POWER OF ATTORNEY

FILE LOCATION 36G4 SERIAL NUMBER 09971087 PATENT NUMBER

THE CORRESPONDENCE ADDRESS HAS BEEN CHANGED TO CUSTOMER # 22428

THE PRACTITIONERS OF RECORD HAVE BEEN CHANGED TO CUSTOMER # 22428

ON 01/13/03 THE ADDRESS OF RECORD FOR CUSTOMER NUMBER 22428 IS:

FOLEY AND LARDNER  
SUITE 500  
3000 K STREET NW  
WASHINGTON DC 20007

AND THE PRACTITIONERS OF RECORD FOR CUSTOMER NUMBER 22428 ARE:

25258	25479	25735	26001	26257	26874	27590	28163	28665	28822
29768	32789	32792	32904	34079	34371	34485	34702	34717	35087
35217	35264	35792	38072	38104	38819	39221	39790	40153	40413
40888	41398	41514	42322	43250	43344	43438	43445	43656	45056
45943	47131	48574							

PTO INSTRUCTIONS: PLEASE TAKE THE FOLLOWING ACTION WHEN THE CORRESPONDENCE ADDRESS HAS BEEN CHANGED TO CUSTOMER NUMBER: RECORD, ON THE NEXT AVAILABLE CONTENTS LINE OF THE FILE JACKET, 'ADDRESS CHANGE TO CUSTOMER NUMBER'. LINE THROUGH THE OLD ADDRESS ON THE FILE JACKET LABEL AND ENTER ONLY THE 'CUSTOMER NUMBER' AS THE NEW ADDRESS. FILE THIS LETTER IN THE FILE JACKET. WHEN ABOVE CHANGES ARE ONLY TO FEE ADDRESS AND/OR PRACTITIONERS OF RECORD, FILE LETTER IN THE FILE JACKET. THIS FILE IS ASSIGNED TO GAU 3624.



UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office

ASSISTANT SECRETARY AND COMMISSIONER  
OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

*Handwritten initials*

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FEB 05 2003

GROUP 3600

**CHANGE OF ADDRESS/POWER OF ATTORNEY**

FILE LOCATION 36X1 SERIAL NUMBER 09590692 PATENT NUMBER

THE CORRESPONDENCE ADDRESS HAS BEEN CHANGED TO CUSTOMER # 22428

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40888	41398	41514	42322	43250	43344	43438	43445	43656	45056
45943	47131	48574							

PTO INSTRUCTIONS: PLEASE TAKE THE FOLLOWING ACTION WHEN THE CORRESPONDENCE ADDRESS HAS BEEN CHANGED TO CUSTOMER NUMBER: RECORD, ON THE NEXT AVAILABLE CONTENTS LINE OF THE FILE JACKET, 'ADDRESS CHANGE TO CUSTOMER NUMBER'. LINE THROUGH THE OLD ADDRESS ON THE FILE JACKET LABEL AND ENTER ONLY THE 'CUSTOMER NUMBER' AS THE NEW ADDRESS. FILE THIS LETTER IN THE FILE JACKET. WHEN ABOVE CHANGES ARE ONLY TO FEE ADDRESS AND/OR PRACTITIONERS OF RECORD, FILE LETTER IN THE FILE JACKET. THIS FILE IS ASSIGNED TO GAU 3624.



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Attorney Docket No. 024051/0135

Applicant: Gary Allan KEMP II et al.

Title: CLICK BASED TRADING WITH INTUITIVE GRID DISPLAY OF MARKET DEPTH

Serial No.: 09/590,692

Filed: June 9, 2000

Examiner: Weisberger, Richard C.

Art Unit: 3624

#26  
 and  
 2/21/03

**INFORMATION DISCLOSURE STATEMENT  
 UNDER 37 CFR §1.56 and 37 CFR §1.97**

Commissioner for Patents  
 Washington, D.C. 20231

RECEIVED  
 FEB 14 2003  
 GROUP 3600

Sir:

Submitted herewith on Form PTO-SB/08 is a listing of documents known to Applicants in order to comply with Applicants' duty of disclosure pursuant to 37 CFR 1.56. A copy of each listed document is being submitted to comply with the provisions of 37 CFR 1.97 and 1.98.

The submission of any document herewith, which is not a statutory bar, is not intended as an admission that such document constitutes prior art against the claims of the present application or that such document is considered material to patentability as defined in 37 CFR §1.56(b). Applicants do not waive any rights to take any action which would be appropriate to antedate or otherwise remove as a competent reference any document which is determined to be a prima facie prior art reference against the claims of the present application.

**TIMING OF THE DISCLOSURE**

The instant Information Disclosure Statement is believed to be filed in accordance with 37 C.F.R. 1.97(b), within three months of the filing of a request for continued examination (RCE) in the subject case.

**RELEVANCE OF EACH DOCUMENT**

Documents A1-A6 were listed in a Search Report for a counterpart British application. A copy of the Search Report is also being provided herewith.

Applicants respectfully request that the listed documents be considered by the Examiner and formally be made of record in the present application and that an initialed copy of Form PTO/SB/08 be returned in accordance with MPEP §609.

Respectfully submitted,

*FEBRUARY 11, 2003*

Date



Ankur D. Shah  
Registration No. 41,514

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Washington Harbour  
3000 K Street, N.W., Suite 500  
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Should additional fees be necessary in connection with the filing of this paper, or if a petition for extension of time is required for timely acceptance of same, the Commissioner is hereby authorized to charge Deposit Account No. 19-0741 for any such fees, and applicant(s) hereby petition for any needed extension of time.

#26

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO		<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>		<b>Application Number</b>	09/590,692
		<b>Filing Date</b>	06/09/2000
Date Submitted: February 11, 2003 <i>(use as many sheets as necessary)</i>		<b>First Named Inventor</b>	Gary Allan Kemp II
		<b>Group Art Unit</b>	3624
Sheet 1 of 1		<b>Examiner Name</b>	R. Weisberger
		<b>Attorney Docket Number</b>	024051-0135

**U.S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (if known)			
OIP/A1 FEB 11 2003		5,297,032		TROJAN et al.	03/22/1994	

**FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Name of Patentee or Applicant of Cited Documents	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)				
[Signature]	A2		WO 00/65510		PCT	11/02/2000		
	A3		WO 01/16830		PCT	03/08/2001		
	A4		WO 01/16852		PCT	03/08/2001		
	A5		WO 01/22315		PCT	03/29/2001		
	A6		WO 01/88808		PCT	11/22/2001		

**OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>6</sup>

RECEIVED  
FEB 14 2003  
GROUP 3600

Examiner Signature	[Signature]	Date Considered	3/0
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> See attached Kinds of U.S. Patent Documents. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, D.C. 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, D.C. 20231.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Attorney Docket No. 024051/0135

#27  
3/21/03

Applicant: Gary Allan KEMP II et al.  
Title: CLICK BASED TRADING WITH INTUITIVE GRID DISPLAY OF MARKET DEPTH  
Serial No.: 09/590,692  
Filed: June 9, 2000  
Examiner: Weisberger, Richard C.  
Art Unit: 3624  
Allowed: July 31, 2002

**REQUEST FOR CONTINUED EXAMINATION (RCE)  
TRANSMITTAL**

Commissioner for Patents  
Box RCE  
Washington, D.C. 20231

Sir:

This is a Request for Continued Examination (RCE) under 37 C.F.R. § 1.114 of the above-identified application. This RCE and the enclosed items listed below are being filed prior to the earliest of: (1) payment of the issue fee (unless a petition under 37 C.F.R. § 1.313 is granted); (2) abandonment of the application; or (3) the filing of a notice of appeal to the U.S. Court of Appeals for the Federal Circuit under 35 U.S.C. §141, or the commencement of a civil action under 35 U.S.C. §145 or §146 (unless the appeal or civil action is terminated).

1. Submission required under 37 C.F.R. §1.114: (check items that apply)

a. Previously submitted:

- Please enter and consider the amendment/reply previously filed on \_\_\_\_\_.
- Please consider the Affidavit(s)/Declaration(s) previously filed on \_\_\_\_\_ but not considered.
- Please consider the arguments in the Appeal Brief or Reply Brief under 37 C.F.R. § 1.116 previously filed on \_\_\_\_\_.
- Other \_\_\_\_\_.

b. Enclosed are:

- Petition to Withdraw of Application from Issue under 37 C.F.R. § 1.313(c)(2).
- Information Disclosure Statement.
- Form PTO SB/08 with copies of 7 listed references.
- Amendment/Reply.

Serial No. 09/590,692

Attorney Docket No. 024051/0135

- Affidavit(s)/Declaration(s).
- Other .

Miscellaneous:

- Suspension of action of the above-identified application is requested under 37 C.F.R. § 1.103(c) for a period of \_\_\_ months.

The filing fee is calculated below:

	Claims as Amended	Previously Paid For	Extra Claims Present	Rate	Fee Totals
RCE Fee 1.17(e)				\$740.00	\$740.00
Total Claims:	67	67	0	x \$16.00	= \$0.00
Independents:	6	6	0	x \$84.00	= \$0.00
First presentation of any Multiple Dependent Claims:				+ \$280.00	= \$0.00
				CLAIMS FEE TOTAL:	= \$740.00

- Applicant hereby petitions for an extension of time under 37 C.F.R. § 1.136(a) for the total number of months checked below:

<input type="checkbox"/>	Extension for response filed within the first month:	\$110.00	\$0.00
<input type="checkbox"/>	Extension for response filed within the second month:	\$400.00	\$0.00
<input type="checkbox"/>	Extension for response filed within the third month:	\$920.00	\$0.00
<input type="checkbox"/>	Extension for response filed within the fourth month:	\$1,440.00	\$0.00
<input type="checkbox"/>	Extension for response filed within the fifth month:	\$1,960.00	\$0.00
	EXTENSION FEE TOTAL:		\$0.00
	CLAIMS AND EXTENSION FEE TOTAL:		\$740.00
<input checked="" type="checkbox"/>	Small Entity Fees Apply (subtract 1/3 of above):		\$370.00
<input type="checkbox"/>	Suspension of action requested under 37 C.F.R. § 1.103(c)		\$0.00
	TOTAL FEE:		\$370.00

- A check in the amount of \$500.00 (\$130.00/Petition Fee & \$370.00/Filing Fee) is enclosed.
- The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741.



Serial No. 09/590,692

Attorney Docket No. 024051/0135

Please direct all correspondence to the undersigned attorney or agent at the address indicated below.

Respectfully submitted,

*NOVEMBER 12, 2002*



Date

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Facsimile: (202) 672-5399

#27 1/2 D

Atty. Dkt. No. 024051-0135

6-8-04

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Gary Alan KEMP II et al.

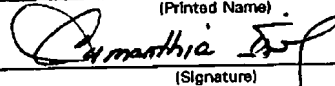
Title: CLICK BASED TRADING WITH INTUITIVE GRID DISPLAY OF MARKET DEPTH

Appl. No.: 09/590,692

Filing Date: 06/09/2000

Examiner: R. Weisberger

Art Unit: 3624

<b>CERTIFICATE OF FACSIMILE TRANSMISSION</b>	
I hereby certify that this paper is being facsimile transmitted to the United States Patent and Trademark Office, Washington, D.C. on the date below.	
Cymantia Irving	
(Printed Name)	
	
(Signature)	
March 21, 2003	
(Date of Deposit)	

*Supplement*  
**AMENDMENT**

Commissioner for Patents  
Washington, D.C. 20231

Sir:

Please amend the application as follows:

**In the Specification:**

In accordance with 37 CFR § 1.121, please substitute for the paragraph starting on line 10 of page 17, the following rewritten version of the same paragraph, as amended. The changes are shown explicitly in the attached "Marked Up Version Showing Changes Made."

Using the screen display and values from Figure 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.

06/08/2004 MJONES1 00000001 190741 09590692  
01 FC:2202 54.00 DA

**In the Claims:**

Atty. Dkt. No. 024051-0135

In accordance with 37 CFR § 1.121, please substitute for claims 22, 23, 29, 30, and 35-40, the following rewritten versions of the same claims, as amended. The changes are shown explicitly in the attached "Marked Up Version Showing Changes Made."

Further, please add new claims 89-95 as indicated below.

*DI* ~~22~~. (Amended) 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 of prices comprising a plurality of areas for receiving commands from the user input device 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 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.

~~23~~. (Amended) A method of placing a trade order according to claim ~~22~~, 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.

*D2* ~~29~~. (Amended) A computer readable medium having program code recorded thereon, for execution on a computer having a graphical user interface and a user input

Atty. Dkt. No. 024051-0135

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;

02 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.

03 9-30. (Amended) A computer readable medium having program code recorded thereon, for execution on a computer to place a trade order according to claim 29,8 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.

04 14-35. (Amended) 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

Atty. Dkt. No. 024051-0135

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.

D4

<sup>15</sup>  
~~38~~. (Amended) A client system for placing a trade order for a commodity according to claim ~~35~~<sup>14</sup>, 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.

D5

<sup>16</sup>  
~~37~~. (Amended) A client system for placing a trade order for a commodity according to claim ~~36~~<sup>15</sup>, 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.

<sup>17</sup>  
~~38~~. (Amended) A client system for placing a trade order for a commodity according to claim ~~36~~<sup>15</sup>, 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.

D6

<sup>14</sup>  
~~39~~. (Amended) A client system for placing a trade order for a commodity according to claim ~~38~~<sup>13</sup>, 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

Atty. Dkt. No. 024051-0135

position of the pointer at the time of said single action and for a price corresponding to said position.

*De*  
<sup>19</sup>~~40~~. (Amended) A client system for placing a trade order for a commodity according to claim <sup>18</sup>~~39~~, 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.

---

<sup>50</sup>~~49~~. (New) The method of claim <sup>2</sup>~~23~~, wherein the bid order entry region overlaps with a bid display region and the ask order entry region overlaps with an ask display region.

<sup>51</sup>~~50~~. (New) A computer readable medium having program code recorded thereon, for execution on a computer to place a trade order according to claim <sup>9</sup>~~30~~, wherein the bid order entry region overlaps with a bid display region and the ask order entry region overlaps with an ask display region.

*DM*  
<sup>52</sup>~~51~~. (New) A client system for placing a trade order for a commodity according to claim <sup>15</sup>~~36~~, wherein the bid order entry region overlaps with a bid display region and the ask order entry region overlaps with an ask display region.

<sup>53</sup>~~52~~. (New) The method of claim <sup>1</sup>~~22~~ 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.

<sup>54</sup>~~53~~. The method of claim <sup>53</sup>~~92~~ 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.

Atty. Dkt. No. 024051-0135

<sup>55</sup>  
~~94.~~ The method of claim ~~22~~<sup>1</sup> 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.

P7

<sup>56</sup>  
~~95.~~ The method of claim ~~22~~<sup>1</sup> wherein the plurality of additional parameters comprises a price and type of order.

Atty. Dkt. No. 024051-0135

**REMARKS**

Claims 22-88 were pending in the application. Claims 22, 23, 29, 30, and 35-40 have been amended. Claims 89-95 have been added. No new matter has been introduced. Thus, claims 22-95 are pending for consideration at this time.

Applicants thank the Examiner for the telephone interview of March 21, 2003. The pending claims have been amended as discussed. The discussion resulted in agreement that the claims as amended are allowable and that a Notice of Allowance would be issued promptly.

Applicants note that the amendments are being made without prejudice and solely in order advance prosecution of this application more rapidly to issuance.

Respectfully submitted,

By Date March 21, 2003FOLEY & LARDNER  
Customer Number: 22428

22428

PATENT TRADEMARK OFFICE

Telephone: (202) 672-5300  
Facsimile: (202) 672-5399Ankur D. Shah  
Attorney for Applicant  
Registration No. 41,514

Should additional fees be necessary in connection with the filing of this paper, or if a petition for extension of time is required for timely acceptance of same, the Commissioner is hereby authorized to charge deposit account No. 19-0741 for any such fees; and applicant hereby petitions for any needed extension of time.



Atty. Dkt. No. 024051-0135

**MARKED UP VERSION SHOWING CHANGES MADE****In the Specification:**

The paragraph starting on line 10 of page 17:

Using the screen display and values from Figure 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] 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 [buy] sell 17 lots at a price of 90.

**In the Claims:**

22. (Amended) 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 [and having preset parameters for trade orders], said method, comprising:

setting a preset parameter for the trade order

displaying [the] market depth of [a] the commodity [traded in a market], 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 of prices comprising a plurality of areas for receiving commands from the user input device to send trade orders, each area corresponding to a price of the static display of prices; and

[initiating placement of a] selecting a particular area in the order entry region [trade order of the commodity] through a single action of the user input device with a pointer of the user input device positioned over [an] the particular area [in said dynamic displays of bids and asks] to set a plurality of additional parameters for the trade order and send the trade order to the electronic exchange;

Atty. Dkt. No. 024051-0135

wherein the contents of the trade order are based in part upon the preset parameters and the position of the pointer at the time of said single action].

23. (Amended) A method of placing a trade order according to claim 22, 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 [display] 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 [display] region.

29. (Amended) A computer readable medium having program code recorded thereon, for execution on a computer having a graphical user interface and a user input device [and having preset parameters for trade orders], 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 [first] second program code displaying [the] market depth of a commodity [traded in a market], 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 [second] fourth program code for [initiating placement of a trade order of the commodity through a single action of the user input device with a pointer of the user input device positioned over an area in said dynamic displays of bids and asks; and

a third program code for setting characteristics of the trade order based in part upon the preset parameters and the position of the pointer at the time of said single action] 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.

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30. (Amended) A computer readable medium having program code recorded thereon, for execution on a computer to place a trade order according to claim 29, 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 [display] 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 [display] region.

35. (Amended) 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 [the] market depth of a commodity [traded in a market], 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 [said dynamic displays of bids and asks and for initiating placement of a trade order of the commodity through a single action of the user input device] the order entry region; and

a trade order [characteristics setting component for setting characteristics of the trade order based in part upon preset parameters and the position of the pointer at the time of said single action] 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.

36. (Amended) A client system for placing a trade order for a commodity according to claim 35, wherein said trade order [characteristics setting] sending

Atty. Dkt. No. 024051-0135

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 [display] 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 [display] region.

37. (Amended) A client system for placing a trade order for a commodity according to claim 36, wherein said trade order [characteristics setting] 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.

38. (Amended) A client system for placing a trade order for a commodity according to claim 36, wherein said trade order [characteristics setting] 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.

39. (Amended) A client system for placing a trade order for a commodity according to claim 36, wherein said trade order [characteristics setting] 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.

40. (Amended) A client system for placing a trade order for a commodity according to claim 39, wherein said trade order [characteristics setting] 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.

# FOLEY LARDNER

ATTORNEYS AT LAW

WASHINGTON HARBOUR  
3000 K STREET, N.W., SUITE 500  
WASHINGTON, D.C. 20007-5143  
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## FACSIMILE TRANSMISSION

**Total # of Pages 16 (including this page)**

TO:	PHONE #:	FAX #:
Examiner Weisberger – Art Unit 3624 United States Patent and Trademark Office		703-872-9025

<p><b>From :</b> William T. Ellis/Daniel L. Girdwood</p> <p><b>Date :</b> March 21, 2003</p> <p><b>Client/Matter No :</b> 024051-0135</p> <p><b>User ID No :</b> 0251</p>
---

### MESSAGE:

Re: Serial No.: 09/590,692  
 Inventor(s): Gary Alan KEMP II et al.  
 Filing Date: June 9, 2000  
 Title: **CLICK BASED TRADING WITH INTUITIVE GRID DISPLAY OF MARKET DEPTH**

I hereby certify that the following paper(s) and or fee along with any attachments referred to or identified as being attached or enclosed are being transmitted via facsimile to the U.S. Patent and Trademark Office under on the date as shown below.

**March 21, 2003**

**Ankur D. Shah**

If there are any problems with this transmission or if you have not received all of the pages, please call 202.672.5340.

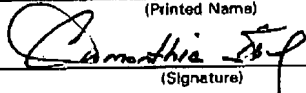
Operator:	Time Sent:	Return Original To: Cymanthia T. Irving
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**CONFIDENTIALITY NOTICE: THE INFORMATION CONTAINED IN THIS FACSIMILE MESSAGE IS INTENDED ONLY FOR THE PERSONAL AND CONFIDENTIAL USE OF THE DESIGNATED RECIPIENTS NAMED ABOVE. THIS MESSAGE MAY BE AN ATTORNEY-CLIENT COMMUNICATION, AND AS SUCH IS PRIVILEGED AND CONFIDENTIAL. IF THE READER OF THIS MESSAGE IS NOT THE INTENDED RECIPIENT OR ANY AGENT RESPONSIBLE FOR DELIVERING IT TO THE INTENDED RECIPIENT, YOU ARE HEREBY NOTIFIED THAT YOU HAVE RECEIVED THIS DOCUMENT IN ERROR, AND THAT ANY REVIEW, DISSEMINATION, DISTRIBUTION OR COPYING OF THIS MESSAGE IS STRICTLY PROHIBITED. IF YOU HAVE RECEIVED THIS COMMUNICATION IN ERROR, PLEASE NOTIFY US IMMEDIATELY BY TELEPHONE AND RETURN THE ORIGINAL MESSAGE TO US BY MAIL. THANK YOU.**

Atty. Dkt. No. 024051-0135

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Gary Alan KEMP II et al.  
 Title: CLICK BASED TRADING WITH  
 INTUITIVE GRID DISPLAY OF  
 MARKET DEPTH  
 Appl. No.: 09/590,692  
 Filing Date: 06/09/2000  
 Examiner: R. Weisberger  
 Art Unit: 3624

CERTIFICATE OF FACSIMILE TRANSMISSION	
I hereby certify that this paper is being facsimile transmitted to the United States Patent and Trademark Office, Washington, D.C. on the date below.	
Cymanthia Irving (Printed Name)	
 (Signature)	
March 21, 2003 (Date of Deposit)	

**AMENDMENT TRANSMITTAL**

Commissioner for Patents  
 Washington, D.C. 20231

Sir:

Transmitted herewith is an amendment in the above-identified application.

- Small Entity status under 37 C.F.R. § 1.9 and § 1.27 has been established by a Small Entity statement previously submitted.
- Small Entity statement is enclosed.
- The fee required for additional claims is calculated below:

	Claims as Amended	Previously Paid For	Extra Claims Present	Rate	Additional Claims Fee
Total Claims:	73	67	6	\$18.00	\$108.00
Independents:	6	6	0	\$84.00	\$0.00
First presentation of any Multiple Dependent Claims:				\$280.00	\$0.00
				CLAIMS FEE TOTAL:	\$108.00

- Applicant hereby petitions for an extension of time under 37 C.F.R. 51.136(a) for the total number of months checked below:

Atty. Dkt. No. 024051-0135

<input type="checkbox"/>	Extension for response filed within the first month:	\$110.00	\$0.00
<input type="checkbox"/>	Extension for response filed within the second month:	\$410.00	\$0.00
<input type="checkbox"/>	Extension for response filed within the third month:	\$930.00	\$0.00
<input type="checkbox"/>	Extension for response filed within the fourth month:	\$1,450.00	\$0.00
<input type="checkbox"/>	Extension for response filed within the fifth month:	\$1,970.00	\$0.00
	EXTENSION FEE TOTAL:		\$0.00
	CLAIMS AND EXTENSION FEE TOTAL:		\$108.00
<input checked="" type="checkbox"/>	Small Entity Fees Apply (subtract 1/2 of above):		\$54.00
	TOTAL FEE:		\$54.00

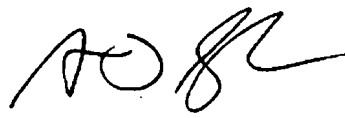
Please charge Deposit Account No. 19-0741 in the amount of \$54.00. A duplicate copy of this transmittal is enclosed.

A check in the amount of \$54.00 is enclosed.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Please direct all correspondence to the undersigned attorney or agent at the address indicated below.

Respectfully submitted,



Date March 21, 2003

By \_\_\_\_\_

FOLEY & LARDNER  
Customer Number: 22428

Ankur D. Shah  
Attorney for Applicant  
Registration No. 41,514



22428

PATENT TRADEMARK OFFICE

Telephone: (202) 672-5300

Facsimile: (202) 672-5399

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Gary Alan KEMP II et al.

Title: CLICK BASED TRADING WITH INTUITIVE GRID DISPLAY OF MARKET DEPTH

Appl. No.: 09/590,692

Filing Date: 06/09/2000

Examiner: R. Weisberger

Art Unit: 3624

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TECHNOLOGY CENTER 3609  
03 OCT 21 AM 8:31

**INFORMATION DISCLOSURE STATEMENT**  
**UNDER 37 CFR §1.56**

Commissioner for Patents  
PO Box 1450  
Alexandria, Virginia 22313-1450

Sir:

Submitted herewith on Form PTO/SB/08 is a listing of documents known to Applicants in order to comply with Applicants' duty of disclosure pursuant to 37 CFR §1.56. A copy of each listed document is being submitted to comply with the provisions of 37 CFR §1.97 and §1.98.

The submission of any document herewith, which is not a statutory bar, is not intended as an admission that such document constitutes prior art against the claims of the present application or that such document is considered material to patentability as defined in 37 CFR §1.56(b). Applicants do not waive any rights to take any action which would be appropriate to antedate or otherwise remove as a competent reference any document which is determined to be a *prima facie* art reference against the claims of the present application.

**TIMING OF THE DISCLOSURE**

The listed documents are being submitted in compliance with 37 CFR §1.97(b), before the mailing date of the first Office Action after the filing of a request for continued examination under 37 C.F.R. § 1.114.

10/28/2003 SWILLIAR 00000007 09552692 10.00 0P  
01 FC:1814



**RELEVANCE OF EACH DOCUMENT**

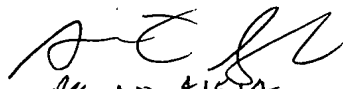
Document A7 relates to a Commodity Exchanging Apparatus, Commodity Exchanging System, Commodity Exchanging Method and Storage Medium.

English translations of the foreign-language document is not readily available; however, an English language abstract is attached herewith. The absence of such a translation does not relieve the PTO from its duty to consider the submitted document (37 C.F.R. § 1.98 and MPEP § 609).

Applicants respectfully request that any listed document be considered by the Examiner and be made of record in the present application and that an initialed copy of Form PTO/SB/08 be returned in accordance with MPEP §609.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 CFR §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741.

Respectfully submitted,

By   
By Reg No 41574

Date October 20, 2003

FOLEY & LARDNER  
Customer Number: 22428  
Telephone: (202) 672-5485  
Facsimile: (202) 672-5399

William T. Ellis  
Attorney for Applicant  
Registration No. 26,874

***IN THE UNITED STATES PATENT AND TRADEMARK OFFICE***

Applicant: Gary Alan KEMP II et al.  
Title: CLICK BASED TRADING WITH INTUITIVE GRID DISPLAY OF  
MARKET DEPTH  
Appl. No.: 09/590,692  
Filing Date: 06/09/2000  
Examiner: R. Weisberger  
Art Unit: 3624

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**INFORMATION DISCLOSURE STATEMENT**  
**UNDER 37 CFR §1.56**

Commissioner for Patents  
PO Box 1450  
Alexandria, Virginia 22313-1450

Sir:

Submitted herewith on Form PTO/SB/08 is a listing of documents known to Applicants in order to comply with Applicants' duty of disclosure pursuant to 37 CFR §1.56. A copy of each listed document is being submitted to comply with the provisions of 37 CFR §1.97 and §1.98.

The submission of any document herewith, which is not a statutory bar, is not intended as an admission that such document constitutes prior art against the claims of the present application or that such document is considered material to patentability as defined in 37 CFR §1.56(b). Applicants do not waive any rights to take any action which would be appropriate to antedate or otherwise remove as a competent reference any document which is determined to be a *prima facie* art reference against the claims of the present application.

**TIMING OF THE DISCLOSURE**

The listed documents are being submitted in compliance with 37 CFR §1.97(b), before the mailing date of the first Office Action after the filing of a request for continued examination under 37 C.F.R. § 1.114.

**RELEVANCE OF EACH DOCUMENT**

The listed documents were cited by a patent examiner during the prosecution of a corresponding foreign patent application.

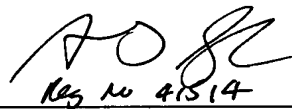
Applicants respectfully request that any listed document be considered by the Examiner and be made of record in the present application and that an initialed copy of Form PTO/SB/08 be returned in accordance with MPEP §609.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 CFR §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741.

Respectfully submitted,

Date November 12, 2003

By \_\_\_\_\_



Reg No 41514

FOLEY & LARDNER  
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Facsimile: (202) 672-5399

William T. Ellis  
Attorney for Applicant  
Registration No. 26,874

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

**Attorney Docket No. 024051/0135**

Applicant: Gary Allan KEMP II et al.

Title: CLICK BASED TRADING WITH INTUITIVE GRID DISPLAY OF MARKET DEPTH

Serial No.: 09/590,692

Filed: June 9, 2000

Examiner: Weisberger, Richard C.

Art Unit: 3624

Allowed: July 31, 2002

**INFORMATION DISCLOSURE STATEMENT  
UNDER 37 CFR §1.56 and 37 CFR §1.97**

Commissioner for Patents  
 Washington, D.C. 20231

Sir:

Submitted herewith on Form PTO-SB/08 is a listing of documents known to Applicants in order to comply with Applicants' duty of disclosure pursuant to 37 CFR 1.56. A copy of each listed document is being submitted to comply with the provisions of 37 CFR 1.97 and 1.98. Both Silverman references were previously submitted with Applicants' Petition to Make Special, and Applicants believe the Silverman references are already of record in the application; however, in an abundance of caution Applicants are re-submitting the Silverman references on the enclosed Form PTO-SB/08. It is requested that the documents be given careful consideration and that they be cited of record in the prosecution history of the present application so that they will appear on the face of the patent issuing from the present application.

The submission of any document herewith, which is not a statutory bar, is not intended as an admission that such document constitutes prior art against

the claims of the present application or that such document is considered material to patentability as defined in 37 CFR §1.56(b). Applicants do not waive any rights to take any action which would be appropriate to antedate or otherwise remove as a competent reference any document which is determined to be a prima facie prior art reference against the claims of the present application.

Portions of the references may be material to the examination of the pending claims, however no such admission is intended. 37 C.F.R. 1.97 (h). The references have not been reviewed in sufficient detail to make any other representation and, in particular, no representation is intended as to the relative importance of any portion of the references.

#### **TIMING OF THE DISCLOSURE**

The instant Information Disclosure Statement is being filed in compliance with 37 C.F.R. §1.97(b) within three (3) months of the filing date of a request for continued examination (RCE) in the above-identified application.

Applicants respectfully request that the listed documents be considered by the Examiner and formally be made of record in the present application and that an initialed copy of Form PTO/SB/08 be returned in accordance with MPEP §609.

Respectfully submitted,

NOVEMBER 12, 2002

Date



Ankur D. Shah  
Registration No. 41,514

FOLEY & LARDNER  
Washington Harbour  
3000 K Street, N.W., Suite 500  
Washington, D.C. 20007-5143  
Telephone: (202) 672-5300  
Facsimile: (202) 672-5399

Should additional fees be necessary in connection with the filing of this paper, or if a petition for extension of time is required for timely acceptance of same, the Commissioner is hereby authorized to charge Deposit Account No. 19-0741 for any such fees, and applicant(s) hereby petition for any needed extension of time.



# TRADING TECHNOLOGIES™

## FACSIMILE COVER SHEET

**TO:** Richard Weisberger  
**COMPANY:** USPTO  
**PHONE NUMBER:**  
**FAX NUMBER:** 703-872-9025

**FROM:** Steve Borsand  
**COMPANY:** Trading Technologies  
222 S. Riverside Plaza, Suite 1100  
Chicago, IL 60606 – USA  
**PHONE NUMBER:** (312) 476-1018  
**FAX NUMBER:** (312) 476-1001

**DATE:** 12/19/03  
**# OF PAGES:**

**NOTES:**  
**RE: 09/590,692**

Richard – Here are the documents that you requested: the Terminal Disclaimer and IDSs filed in October and November 2003. I have not included any Information Disclosure Statements that were filed before October 2003.

Thanks,  
Steve Borsand

***IN THE UNITED STATES PATENT AND TRADEMARK OFFICE***

Applicant: Gary Alan KEMP II et al.  
Title: CLICK BASED TRADING WITH  
INTUITIVE GRID DISPLAY OF  
MARKET DEPTH  
Appl. No.: 09/590,692  
Filing Date: 06/09/2000  
Examiner: R. Weisberger  
Art Unit: 3624

**TERMINAL DISCLAIMER**

Commissioner for Patents  
PO Box 1450  
Alexandria, Virginia 22313-1450

Sir:

Your Petitioner, Trading Technologies Inc., having its principal place of business at 222 S. Riverside Plaza, Suite 1100, Chicago, IL 60606, hereinafter represents that it is the owner of the entire right, title, and interest in and to U.S. Patent Application Serial No. 09/590,692, filed 06/09/2000, by virtue of an Assignment filed and recorded on October 2, 2000 on Reel/Frame 011188/0355 in the U.S. Patent and Trademark Office, a copy of which is attached hereto as APPENDIX A. Further, your Petitioner represents that it is the owner of U.S. Patent Application No. 09/894,637, filed 06/27/2001, by virtue of an Assignment filed and recorded on October 2, 2000 on Reel/Frame 011188/0355 in the U.S. Patent and Trademark Office, a copy of which is attached hereto as APPENDIX B.

Your Petitioner, Trading Technologies Inc., hereby disclaims the terminal part of the term of any patent granted on U.S. Patent Application 09/590,692 which would extend beyond the full statutory term, as shortened by any terminal disclaimer, of any patent granted on U.S. Patent Application 09/894,637, and hereby agrees that any patent so granted on U.S. Patent Application 09/590,692 shall be enforceable only for and during such period that the



legal title to any patent granted on U.S. Patent Application 09/894,637 shall be the same as the legal title to any patent granted on U.S. Patent Application 09/590,692, this agreement to run with any patent granted on U.S. Patent Application 09/590,692 and to be binding upon the grantee, its successors or assigns.

In making the above disclaimer, Petitioner does not disclaim any terminal part of any patent granted on U.S. Patent Application 09/590,692, prior to the full statutory term of any patent granted on U.S. Patent Application 09/894,637 as defined in 35 U.S.C. §§154-156 and 173, in the event that any patent granted on U.S. Patent Application 09/894,637 expires for failure to pay a maintenance fee, is held unenforceable or is found invalid in a final judgment by a court of competent jurisdiction, is statutorily disclaimed in whole or terminally disclaimed under 37 CFR §1.321(a), has all claims canceled by a reexamination certificate or as a result of an interference proceeding, or is otherwise not deemed to provide the rights conveyed by 35 USC §154, prior to the full statutory term of any patent granted on U.S. Patent Application 09/894,637 as defined in 35 USC §§154-156 and 173, except for the separation of legal title stated above. Further, Petitioner does not disclaim any terminal part of a patent granted on U.S. Patent Application 09/590,692 that would extend beyond the present termination of any patent granted on U.S. Patent Application 09/894,637, in the event that such present term is extended by virtue of compliance with the conditions for term extension of any present or future patent term extension provisions of the patent law, including but not limited to 35 U.S.C. §§155, 155A or 156, and without waiving Petitioner's right to extend the term of a patent granted on U.S. Patent Application 09/590,692 to the extent provided by law.

The undersigned, being the Attorney of Record for U.S. Patent Application 09/590,692, and duly authorized to act on behalf of Petitioner, certifies that he has reviewed the Assignments attached as APPENDICES A and B, and to the best of his knowledge and belief, legal title to U.S. Patent Application 09/590,692 and any patent granted on U.S. Patent Application 09/894,637 rests with Petitioner, Trading Technologies Inc. The undersigned declares that all statements made herein of their 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, Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the above-identified application or any patent issuing therefrom.

Respectfully submitted,

Date: October 20, 2003

By   
Reg No 41514

FOLEY & LARDNER

Customer Number: 22428

Telephone: (202) 672-5485

Facsimile: (202) 672-5399

William T. Ellis

Attorney for Applicant

Registration No. 26,874

L Number	Hits	Search Text	DB	Time stamp
1	0	market and stock AND DISPLAY AND TRADING AND BID AND ASK AND DEPTH	DERWENT	2004/01/13 14:48
2	1	market and stock AND DISPLAY AND TRADING AND BID AND ASK AND DEPTH	DERWENT	2004/01/13 14:48

L Number	Hits	Search Text	DB	Time stamp
3	5	market and stock and front and end and screen and display and depth and bid and ask and (trade and trading)	USPAT	2004/01/13 12:27
4	5	market and (stock or stocks) and front and end and screen and display and depth and bid and ask and (trade and trading)	USPAT	2004/01/13 12:27
9	4	market and stock AND DISPLAY AND TRADING AND BID AND ASK AND DEPTH.CLM.	USPAT; EPO; JPO	2004/01/13 12:32
10	24	market and stock AND DISPLAY AND TRADING AND BID AND ASK AND DEPTH	USPAT; EPO; JPO	2004/01/13 12:32

*Handwritten signature or initials*

00221434 SUPPLIER NUMBER: 54405691 (THIS IS THE FULL TEXT)  
**A specialist's quoted depth and the limit order book. (includes related article)**  
Kavajecz, Kenneth A.  
Journal of Finance, 54, 2, 747(2)  
April, 1999

TEXT:

A substantial portion of the **market** microstructure literature demonstrates how a specialist uses quoted prices as an instrument to manage inventory, mitigate the adverse selection problem, and promote price discovery. Well-known examples include Garman (1976), Amihud and Mendelson (1980), Glosten and Milgrom (1985), and Leach and Madhavan (1992).

Equally important, but less investigated, is the quantity aspect of a specialist's price schedule. A specialist posts a **bid depth** and an **ask depth**, in addition to the **bid** and **ask** prices, which specify the maximum quantities for which the respective prices apply. Specialists change their quoted **depth** in 90 percent of all quote changes; moreover, 50 percent of all quote changes are unaccompanied by changes in quoted prices. Therefore, specialists actively manage their quoted depths even when prices are not changing.

The primary objective of this paper is to investigate empirically whether specialists use **depth** as a strategic choice variable to regulate the amount of liquidity they provide. Other important suppliers of liquidity, and competitors to specialists, are public limit orders. Given the public order precedence rule (see ??2092 of the NYSE Rules), limit orders at the quoted prices have priority over the specialist's interest. Consequently, to analyze **depth** contributed by the specialist at any point in time, it is necessary to have an estimate of the limit order book that the specialist is maintaining. The difference between the quoted **depth** and the **depth** on the limit order book is the specialist's contribution to **depth**.

The results show that specialists' quotes may reflect only the limit order book on the side (or sides) of the **market** where they believe there is a chance of informed **trading**. By posting a price schedule that mirrors the volume at the

best buy and sell limit order prices, specialists ensure that any trader demanding immediacy will be crossed with limit orders on the limit order book rather than with their inventory. Changes in quoted **depth** are shown to be consistent with specialists managing their inventory positions as well as having knowledge of the future value of the stock. Finally, both specialists and limit order traders reduce **depth** around information events, thereby reducing their exposure to adverse selection costs.

This work is related to a number of areas of ongoing financial research. On the theoretical **front**, early work that addresses the specialist's price schedule takes quantities as exogenous and proceeds to solve for the equilibrium price for each quantity abstracting from any interaction with a limit order book. For example, Easley and O'Hara (1987) find equilibrium prices assuming two possible **trade** quantities, and Kyle (1985) and Glosten (1989) solve for the complete price/quantity function. More recent work by Rock (1996), Kumar and Seppi (1994), and Seppi (1997) advance the basic model by incorporating the interaction between the specialist and the limit order book; yet their models provide no role for the specialist's quoted **depth**. Another tack, taken by Dupont (1995) and Kavajecz (1998), is to start with the assumption that in the absence of a limit order book the specialist posts a price schedule that specifies a **bid**, **bid depth**, **ask**, and **ask depth**. This schedule specifies that the specialist is willing to purchase (sell) shares at the **bid** (**ask**) up to the amount specified by the **bid** (**ask**) **depth**. The advantage of this construct is twofold: it matches the actual price schedules posted on the New York Stock Exchange (NYSE) and it endogenizes the quantity aspect, allowing it to be a choice variable of the specialist. Both Dupont and Kavajecz suggest that one reason a specialist may reduce his **depth** quotes

is to reduce adverse selection costs. The empirical tests in this paper are motivated by the specialist/limit order book interaction of the Rock (1996), Kumar and Seppi (1994), and Seppi (1997) models and the strict specialist price schedule of the Dupont (1995) and Kavajecz (1998) models. (1)

The remainder of the paper is organized as follows. Section I describes the Trades, Orders, Reports and Quotes (TORQ) data set and the procedure used in constructing the limit order book estimates. Descriptive statistics detail the cross-sectional properties of the constructed limit order books, and the interaction between the specialist and the limit order is investigated. Section II analyzes two motives for the specialist's decision to selectively supply liquidity. Section III performs the empirical test of **depth** contribution around information events. Section IV concludes.

#### I. Limit Order Book

##### A. Definition

A limit order directs a broker or exchange to purchase (sell) a specified quantity at the best available price not to exceed a maximum (fall below a minimum) acceptable price. A limit order book is a collection of limit orders submitted by traders that is maintained by the exchange (or specialist if at the NYSE) pending execution or further action by the issuers. (2) By submitting a limit order a trader is providing other **market** participants with the ability to execute against his limit order. This is the sense in which limit orders provide liquidity to those who demand immediacy. The limit order book is crucial to the analysis of depths because, as a matter of **trading** protocol, the specialist is required to better any limit order price before he can take the **trade** himself (see ??2092 of the NYSE Rules). To assess whether the specialist or the limit order book is supplying the liquidity in the **market**, one must compare the specialist's quotes with the best limit orders on both sides of the **market**.

At first glance it may be difficult to see why a specialist would ever contribute **depth** above that posted on the limit order book, since he can always decide to improve upon the limit order book at the time of the transaction. There are two countervailing forces against such an incentive. First, in addition to being held accountable by the NYSE for posting a narrow spread, maintaining a continuous price, and stabilizing trades, the specialist also must maintain a reasonable level of **depth**. This requirement causes a specialist to supplement **depth** on the limit order book with his own interest to maintain a "deep" **market**. Second, if the specialist were to merely reflect the interest on the limit order book in his quotes, he would lose the ability to signal or advertise his own interest to the **trading** crowd.

##### B. Data and Methodology

The TORQ (Trades, Orders, Reports, and Quotes) database covers 144 NYSE-listed securities over the three months from November 1990 through January 1991. As its name suggests, the TORQ data set contains information on all trades that took place, all orders that were placed via one of the automated routing systems, a detailed report of the counter parties to transactions, and the specialist's prevailing quotes. (3) The order data allow for the construction of an estimate of the limit order book. The estimate is incomplete in the sense that the data only include orders that are placed through one of the automated routing systems. Orders brought to the floor via a floor broker are not included, but this omission does not bias the results or conclusions. Firms are separated into deciles with 15 in each of the first four deciles and 14 in each of the six remaining deciles. Stocks are ranked by average daily **trading** volume over the sample period. (4)

The TORQ database contains three major types of records regarding limit orders: orders, executions, and cancellations. Each order record specifies, among other things, the date and time of submission, the type of order, the order quantity, and the limit price. Execution and cancellation records provide similar information about the underlying order as well as information specific to the execution or cancellation, such as the execution (cancellation) date and time and quantity executed (canceled). The principle behind the limit order book estimation is that at any instant in time the limit order book should reflect those orders remaining after

the orders placed prior to the time in question are netted with all prior execution and cancellation records.

The estimation is done in four steps. The first step entails the identification of existing limit orders at the time the sample started; these are limit orders submitted prior to November 1, 1990, which up to that point had not been executed or canceled. I call this the prebook. Because the orders sought were placed prior to the start of the database, there are no corresponding order records included in the database. Instead, I must infer the existence of the order from subsequent execution and cancellation records. The prebook is constructed by searching over all available records for a given stock and retrieving any execution or cancellation records that refer to an order placed prior to the start of the sample period. Those records are then converted into order records making up the existing limit order book at the beginning of the sample period.

After the prebook is constructed, current records in the database are processed. To estimate the limit order book for a given date and time, all records with a date and time stamp prior to the chosen date and time are selected and separated into their respective categories: orders, executions, and cancellations. The second step in the procedure adds the current orders to the prebook; the result is a listing of all known orders placed prior to the chosen date and time.

Step three entails matching order records with execution records. Recall that execution records contain all the information about the underlying order. This makes it possible to determine which orders were executed. Those orders having matching execution records are eliminated. The remainder are orders or residual orders that were unexecuted prior to the chosen date and time.

The last step performs the analogous procedure using cancellation records. Current cancellation records are matched with the remaining order records and any order with a matching cancellation record is eliminated. (5) The remaining order records are orders that were placed prior to the chosen date and time and were not executed or canceled in entirety. (6) These remaining records constitute the limit order book estimate for the chosen stock at the chosen date and time.

Not all the execution and cancellation records match up to orders as they should. Moreover, orders remain on the limit order book that clearly should have been either executed or canceled. An example of this problem is when there is a buy order on the limit order book that is above the posted **ask**. This scenario would warrant immediate execution of the "misplaced" order. Problem records such as these are eliminated. These problems could have arisen from typographical errors or missing records, both of which would make matching records impossible. Table I shows the average number of records processed for each decile and the average percentage of each record type that is discarded. Analysis on an individual stock basis is shown in the last two rows. The median stock has less than one-half of 1 percent (0.48 percent) of its records discarded, with the worst case discarding 4.17 percent of its total records. The fact that the vast majority of the records match up exactly suggests that the procedure provides a fairly clean estimate of the limit order book. Limit order books are estimated at 30-minute intervals for all 63 business days in the sample period, yielding a maximum of 882 limit order book estimates for each of the 144 stocks in the sample. (7) For an example of a particular limit order book estimate, see the Appendix.

### C. Summary Statistics

This subsection investigates the amount of liquidity provided by the limit orders on the NYSE. For instance, do the limit order books have sufficient shares to be meaningful providers of **depth**? Table II shows the aggregate amount of **depth** provided by the limit order book. The table displays the average number of orders and the average total volume expressed both in (TABULAR DATA FOR TABLE I OMITTED) shares and as a percentage of average daily **trading** volume. On average, there are 10,000 shares or more on each side of the limit order book for all but the smallest stocks. (8) Even though the smaller stocks have fewer shares on their limit order books, they are able to accommodate a much larger fraction of average daily **trading** volume than are the larger stocks. The average number of orders implies that the limit order books are made up of

increasingly larger order as the stocks get smaller (less frequently traded).

Although the limit order books seem to provide a good deal of **depth**, what really matters is the amount of **depth** provided at the **market**. It is this **depth** that is crucial when comparing the specialist's **depth** quotes with the book. Table II also describes the **depth** at the best **bid** and **ask** limit prices. As a percentage of the total volume on the book, **depth** at the **market** ranges from 9 percent to 50 percent. Interestingly, the percentage of **depth** at the **market** is larger for the stocks with the lowest average daily **trading** volume.

(TABULAR DATA FOR TABLE II OMITTED)

Table III presents a comparison of the spread on the limit order book as well as the dispersion of shares away from the best prices. The spread between the best buy-side and sell-side limit orders can be very large, both in terms of dollars and percentages, averaging \$0.73 or 7.96 percent across all stocks. Contrast that with the specialist's quoted spread, which averages \$0.23 or 3.96 percent. This suggests that the specialist plays an important role in narrowing the spread that **market** participants face when demanding liquidity, especially for smaller (less frequently traded) stocks.

The first and last columns of Table III **display** the dispersion of volume on the buy-side and sell-side of the book. The dollar dispersion on the buy-side of the book is the dollar difference between the best buy-side limit order price (TABULAR DATA FOR TABLE III OMITTED) and the volume-weighted average limit price on the buy-side of the book. The dollar dispersion on the sell-side is defined analogously. The percentage dispersion is the dollar dispersion divided by the limit order book's **bid** - **ask** midpoint. Notice that the buy-side has a dispersion of \$1.55 or 9.53 percent and the sell-side has a dispersion of \$1.66 or 24.63 percent. Although the difference between the percentage dispersions is significant at the 0.1 percent level it may simply be an artifact of the stock price being bounded at zero on the buy-side and unbounded on the sell-side.

#### D. Specialist Interaction

The relation between the best prices and quantities on the limit order book and the specialist's posted quotes is crucial to understanding who is providing liquidity. A specialist's strategy of quoting the same price and the same **depth** as the best buy-side (sell-side) limit order insulates the specialist from any informed traders wishing to sell (purchase) shares because the specialist is able to pass the order through to cross with the limit order book. This behavior eliminates unwanted trades, thereby reducing the specialist's exposure to adverse selection costs.

Table IV presents data on how often specialists position their quotes in this way. The results are partitioned into four cases. Column 1 shows the percentage of time when the specialist's prices are inferior to the best limit (TABULAR DATA FOR TABLE IV OMITTED) order on the buy-side and sell-side. This column depicts instances when there are hidden limit orders. By posting a **bid** ( **ask** ) that is lower (higher) than the best buy-side (sell-side) limit order, the specialist hides the existence of these orders from other **market** participants. Column 2 shows the percentage of time that the specialist posts a price equal to the best limit order and a **depth** quote that is less than or equal to the volume of shares on the book at that price. Here, the specialist's quotes reflect only the interest on the limit order book, making the specialist immune to any adverse selection costs. Column 3 shows the percentage of time that the specialist posts the same price as the best limit order and the posted **depth** is set greater than the volume on the book at the best limit order. The difference between the quoted **depth** and the **depth** on the book is the additional **depth** provided by the specialist. (9) Column 4 shows the percentage of time that the specialist posts a better price than that on the limit order book. In these cases, the specialist is providing 100 percent of the **depth** at the **market**.

On one hand, Table IV shows that the specialist is either providing additional **depth** or bettering the price 50 to 75 percent of the time. On the other hand, 25 to 50 percent of the time the specialist effectively removes himself from one side of the **market**; therefore, the specialist is selectively providing liquidity and selectively protecting himself from the



**market** .(10) Columns 5 and 6 give information on the **depth** provided by the limit order book and specialist respectively. The **depth** values are an average of the number of shares pledged by the limit order book and the specialist at the best available price, regardless of whether the best price is posted or hidden. For example, if the specialist is hiding a 1,000-share limit order, the specialist's contribution to **depth** is zero and the contribution from the limit order book is 1,000. Moreover, if the specialist is bettering the limit order book by an eighth, the limit order book contribution to **depth** is zero and the contribution from the specialist is the posted **depth** . These columns reveal that both the limit order book and the specialist provide essential liquidity to the **market** . The **depth** contributions for both the limit order book and the specialist tend to decrease as the stocks become smaller (less frequently traded). Owing to a sharper reduction in contributed **depth** by the specialist, the book provides more of the **depth** for the smaller (less frequently traded) stocks and the specialist provides more of the **depth** for the larger (more frequently traded) stocks. This is consistent with the idea that smaller (less frequently traded) stocks tend to have both higher inventory costs and greater risks of informed **trading** ; therefore, the specialist protects himself by reflecting the interest in the limit order book more often.

It is clear that all liquidity providers, specialists and limit order traders alike, have an incentive to shy away from orders carrying high adverse selection and inventory costs. For those limit order traders that remain to supply liquidity to the smaller (less frequently traded) stocks there are two possibilities: they have to **trade** or they are informed. Traders needing to transact in thinly traded stocks may prefer to submit "at-the-quote" limit orders in order to avoid paying the wide **bid - ask** spread. The same argument can be made if the liquidity provider is informed. Given the thinness of the **market** for small stocks, informed traders might prefer to use "at-the-quote" limit orders to execute their trades, thereby eliminating the **bid - ask** spread. Moreover, the strategy may allow the informed trader to better conceal his information.

## II. The Specialist's Motives

What remains to be answered is when and why a specialist might refrain from adding **depth** to the **depth** on the limit order book. This section focuses on two possible rationales for this behavior. First, the specialist may actively manage his inventory position by taking on larger buy orders and/or curtailing sell orders if his inventory is too short or by taking on larger sell orders and/or curtailing buy orders if his inventory is too long. Second, the specialist could be informed about the direction of the stock price. Positioning the price schedule to reflect the limit order book on the sellside as well as adding **depth** on the buy side when the stock is undervalued shields the specialist from being the counter party to informed traders and simultaneously positions the specialist to purchase undervalued shares. Positioning the price schedule using the opposite strategy would exploit an overvalued stock. These two possible rationales are investigated in turn.

Tests of inventory management cannot be performed directly due to a lack of inventory data, therefore any test must condition on some observable variables that impact the specialist's inventory position. One simple conditioning rule would be to condition on changes in the posted **bid** and **ask** . Consider the following scenario. Suppose prices have been rising due to buying pressure or falling due to selling pressure, and assume that the specialist has been providing at least some of the liquidity. Then over this period, the specialist's inventory position would be reduced if prices were rising and increased if prices were falling. Actions that are consistent with inventory management are for the specialist to reflect the sellside of the limit order book (add **depth** to the **bid** side only) after prices have been rising to curtail further reductions in his inventory and to reflect the buy side of the limit order book (add **depth** to the **ask** side only) after prices have been falling to curtail further increases in his inventory.

Table V conditions the limit order book/quote sample on two consecutive prior price increases (columns 1-4) and decreases (columns 5-8). The table provides a breakdown of the sample by whether the specialist is reflecting the limit order book on both sides, the sellside (**ask** side), the buy side (**bid** side), or whether the specialist is adding

liquidity on both sides of the **market**. Comparing the specialist's quotes after rising prices to those after falling (TABULAR DATA FOR TABLE V OMITTED) prices reveals that although there is little difference in the percentage of times the specialist is reflecting both sides or neither side of the limit order book, there is a difference between the percentage of time the specialist reflects either the sellside or the buy side.

Consistent with the inventory management scenario, the specialist is more likely to reflect the sellside of the book (add **depth** to the **bid** side only) when prices in the previous hour were rising and is more likely to reflect the buy side of the book (add **depth** to the **ask** side only) when prices in the previous hour were falling. The difference between the percentage of time the specialist is reflecting the sellside (buy side) after rising prices and the percentage of time the specialist is reflecting the sellside (buy side) after falling prices is significant at the 0.1 percent (0.5 percent) level. These results are consistent with Hasbrouck and Sofianos (1993), Madhavan and Smidt (1993), and Madhavan and Sofianos (1994), who collectively find evidence of inventory management by specialists. The results shown here serve to reinforce the argument made by Madhavan and Sofianos that inventory management is a passive pursuit of the specialist and is often accomplished "by selectively timing the magnitude and direction of their trades rather than by adjusting prices."

The other possible reason for the specialist to refrain from adding **depth** to the **depth** on the limit order book is information about the future value of the stock price. The idea that the specialist is well informed about the value of the stock is not a new one. Benveniste, Marcus, and Wilhelm (1992) argue that the specialist often has very good information about the **market** participants and what they know about the underlying value of the asset. Reviewing Table V in light of the information hypothesis reveals that although it is consistent with the inventory hypothesis it is also consistent with the information hypothesis. Curtailing sales and promoting purchases after rising prices and curtailing purchases and promoting sales after falling prices help the specialist avoid being the counter party to unprofitable (informed) trades as well as take on profitable (uninformed) trades.

Although Table V provides insights into the information hypothesis, it is a coarse test because conditioning on price changes means that only a subset of the limit order book/quote sample is used. Table VI presents a more refined and comprehensive test of the information hypothesis that utilizes the full sequence of limit order book/quote data to infer whether the position of the specialist's quotes reveals anything about future prices. The test involves a **trading** strategy based solely on the position of the specialist's quotes relative to the limit order book. The interpretations of the quote positions are as follows: Under the information hypothesis, if a specialist adds **depth** only to the buy side of the limit order book, then he is unwilling to sell shares but is willing to buy shares. His quote position reveals that the stock is undervalued. Similarly, if a specialist adds **depth** only to the sellside of the limit order book, then he is unwilling to buy shares but is willing to sell shares. His quote position reveals that the stock is overvalued.

In the spirit of Handa and Schwartz (1996) the test involves placing hypothetical orders according to the specified **trading** strategy, assuming the orders leave the **trading** environment unchanged, and maintaining the portfolio until it is liquidated. Specifically, the strategy entails checking the position of the specialist's quotes relative to the book each half-hour throughout the day. If the specialist has reflected only the sellside of the book for the past three consecutive half-hour periods and the current inventory position is nonpositive, cover any inventory and buy 50 shares. If the specialist has reflected the buy side of the book for the past three consecutive half-hour periods and the current inventory position is nonnegative, liquidate any inventory and sell 50 shares, otherwise maintain the current inventory position. (11) Given that the only information the strategy utilizes is the position of the specialist's quotes relative to the book, if the strategy is profitable it implies the specialist has information about the direction of future prices. The advantage to using such a **trading** strategy is that it allows for the holding period to vary and it quantifies the potential **trading** profits.

Admittedly, this strategy cannot be implemented in practice. First,

it assumes that the trades made by this strategy do not affect prices or depths. Second, the specialist would need to reveal the position of his quotes relative to the limit order book each half-hour. Third, there are no constraints on short-selling. Fourth, both the discount rate and borrowing rate are zero percent. It should be stressed however, that the purpose of this strategy is (TABULAR DATA FOR TABLE VI OMITTED) not to provide a profitable real-world trading strategy but, rather, to test whether the position of the specialist's quotes reveals anything about future prices.

Panel A of Table VI summarizes the results from the posited trading strategy when trades are crossed with the specialist's ask and sales are executed at the specialist's bid. The strategy is constructed to ensure that the maximum trade size (100 shares) is never greater than the minimum posted depth. The table presents information on the number of trades, the shares traded, the mean and median profit per share, the mean and median total profit, and the number of profitable stocks in each decile. The results show overwhelmingly that the strategy is unprofitable. For each decile both the median profit per share and total profit are negative. For only 13 percent of the stocks in the sample is this a profitable strategy; however, notice that the median loss per share is approximately the size of the bid - ask spread for each of the deciles. By having the strategy buy at the ask and sell at the bid, the loss associated with the bid - ask spread is implicitly built into the results. Panel B performs the trading strategy again using the same trading rules except this time it executes all transactions at the midpoint of the posted bid and ask in order to eliminate the cost of the bid - ask spread. The results in Panel B are an improvement over those in Panel A. The full sample results show a mean (median) per share loss of approximately one-sixteenth, \$0.10, (\$0.03) and a mean (median) loss over the three-month period of \$66 (\$23). Although the mean per share loss is not significantly different from zero, the mean total loss is significantly different from zero at the 5 percent level. Despite the aggregate results continuing to show a loss associated with this strategy, 37 percent of the sample generated a profit. The percentage of profitable stocks increases to 47 percent if we focus on the largest four deciles. Contrary to the results in Panel A, those in Panel B provide some evidence in favor of the information hypothesis, especially for the larger (more frequently traded) stocks. The results demonstrate that the position of the specialist's quotes relative to the limit order book can provide information about the direction of changes in the bid - ask spread midpoint. Because the specialist is setting the quotes, he must have some information about the direction of these changes. The results are consistent with work by Hasbrouck and Sofianos (1993) which shows that specialists' profits are generated primarily from short- and medium-term holding periods (fewer than 100 transactions). Although they demonstrate that the bulk of specialists' profits are generated from the bid - ask spread, they are able to identify a small but significant component of specialists' profits over the medium term (10 to 100 transactions) related to specialists' ability to anticipate price reversals over this horizon.

In summary, this section reveals that the use of depth as a strategic variable is a widespread phenomenon. Specialists position their quotes to reflect the interest in the limit order book in order to avoid being the counter party to incoming trades. The investigation into the rationale for the specialist's actions provides evidence consistent with both the inventory management hypothesis and the information hypothesis.

### III. Statistical Tests of Depth Contribution at Information Events

The posited hypothesis is that liquidity providers, specialists in particular, reduce their contribution to depth in order to minimize the costs of trading with market participants who possess more information. This is not the first time researchers have investigated this aspect of liquidity provision. Lee, Mucklow and Ready (1993) investigate changes in price schedules surrounding earnings announcements and Foster and Viswanathan (1994) and Jennings (1994) investigate changes in price schedules surrounding takeover announcements. The empirical work in this paper is most closely related to that of Lee et al. (1993) because they also study how depths and prices interact as well as the role quoted depth plays in determining overall liquidity. They show that liquidity providers

tend to coordinate prices and quantities, with large spreads being associated with lower depths; therefore, it is necessary to consider both prices and depths in order to assess overall liquidity. Their test of quoted **depth** reveals that liquidity providers anticipate adverse selection problems by widening spreads and lowering depths prior to earnings announcements.

This work builds on the work of Lee et al. (1993) in a number of ways. First, they are unable to distinguish between **depth** on the limit order book and **depth** provided by the specialist. Their results speak to aggregate liquidity provided; the work done here can determine who is providing the liquidity and when. Second, their measure of **depth** is the sum of the **bid depth** and the **ask depth**; therefore, even though their results suggest that aggregate **depth** falls, their work does not allow an individual analysis of each side of the **market**. Moreover, since earlier evidence shows that the specialist may be informed about the direction of the stock price, testing the theory on both the **bid** and the **ask** side uniformly may provide misleading results. The real question is whether the liquidity provider (specialist) uses depths to protect himself where he thinks there is a chance of informed **trading**. In the case of earnings announcements, if the announcement is bad news the test examines whether the liquidity provider's **bid depth** is small, and if the announcement is good news the test examines whether the liquidity provider's **ask depth** is small. The opposite side of the **market** may or may not have low **depth** depending on whether the liquidity provider is privy to any information about the announcement. Lastly, the test is expanded to include other information events besides earnings announcements; specifically, monetary policy announcements made by the Federal Reserve's Federal Open **Market** Committee (FOMC) are considered. Fortunately, over the time span of the TORQ sample the FOMC eased monetary policy by lowering the Federal Funds rate 25 basis points on four separate occasions. (12)

The empirical test is an event study around the relevant information event, either earnings announcement or FOMC announcement. Of the 144 stocks in the TORQ database, 88 have earnings announcements within the sample period, and 83 make up the final sample used in the earnings announcement study, whereas 143 of the stocks are included in the FOMC announcement study. (13) As with all event studies, it is imperative that the exact date and time of the event is known. In the case of earnings announcements, the dates and times were obtained from the Dow Jones News Service Broadtape. The Broadtape provides the reported earnings prior to any subsequent corrections as well as the announcement date and time to the nearest minute. The timing for each of the FOMC announcements is 11:35 a.m. EST. The reason for the similarity in the timing of the FOMC announcements is that during this time period monetary policy changes and, more specifically, changes in the desired Federal Funds rate were signaled to the **market** through daily open **market** operations rather than direct public announcement. These operations are conducted each day between 11:30 a.m. and 11:35 a.m. EST.

In addition to determining the timing, earnings announcements must be classified as either "good" or "bad" relative to the **market**'s expectation in order to test the appropriate side of the **market**. The latest Value Line forecast is used as the proxy for the **market**'s expectations. Earnings announcements are classified by whether the actual earnings announcement is higher or lower than the latest Value Line forecast. Not all of the announcements in the sample are followed by Value Line; in those instances the announcement is compared to the respective earnings one year earlier. (14) Of the 83 announcements, 48 are categorized as "bad" and 35 are categorized as "good" announcements.

The statistical test involves using an estimate of the empirical distribution to determine if the **depth** contribution around the announcement is small relative to the contribution in the whole sample. The advantage of bootstrapping the empirical distribution is that it is free from error caused by an incorrect distributional assumption. The test is performed as follows. For each stock, the empirical distribution of the specialist's **depth** contribution, the limit order book's **depth** contribution, and the quoted **depth** are constructed on each side of the **market** separately. Each of the six distributions is made up of 1,000

sample points. Each sample point is an average of a sequence of 14 observations whose beginning point is chosen at random from the relevant **depth** sequence. Choosing a sequence of points helps to account for any serial dependence present in the time series of depths. After constructing the six empirical distributions, the **depth** contribution around each announcement is calculated. For each announcement, a preannouncement and a postannouncement observation are calculated. The preannouncement observation is the average of the **depth** contribution during the day immediately preceding the announcement (14 observations); analogously, the postannouncement observation is the average of the **depth** contribution over the day immediately following the announcement (14 observations). Lastly, each announcement period observation (pre- and post-) for each of the six **depth** sequences (specialist, limit order book, and quoted **depth**) is compared to its respective empirical distribution. For each announcement observation the probability of drawing a sample point that is lower than the announcement observation (p-value) is computed.

#### A. Results

The test results are displayed in Tables VII and VIII. The tables report the results for the specialist, limit order book, and posted quotes for both the preannouncement period (Panel A) and the postannouncement period (Panel B). The values represent the fraction of the announcement observations that fall in the lowest portion of their respective empirical distribution. For example, the first column displays the fraction of announcement observations that fall in the lowest 5 percent of their respective distributions. Correspondingly, each row represents the cumulative distribution of the cross section of announcement observation p-values.

Table VII reports the results for the earnings announcement tests. Each announcement is segmented into the side of the **market** that goes with the announcement (labeled "With") and the side of the **market** that goes against the announcement (labeled "Against"). For example, if the announcement is a good announcement in the sense that it exceeds expectations, then the **ask** side (sellside) of the **market** is labeled "With" and the **bid** side (buyside) is labeled "Against." If the announcement is bad in that it does not meet expectations, then the **bid** side (buyside) is labeled "With" and the **ask** side (sellside) is labeled "Against." This labeling procedure allows the sides of the **market** to be grouped by their relation to the direction of the announcement rather than by whether the orders are buy or sell orders. Given the earlier evidence that specialists may be informed about the future stock price, and therefore may only react on one side of the **market**, the hypothesis predicts a reduction in the **depth** contribution by liquidity providers on the side of the **market** labeled "With."

The reported values provide a number of interesting results. First, a substantial number of the preannouncement period depths are small compared to their respective distributions as seen by the cumulative distributions skewed to the left, especially for the posted quotes and the limit order book. As an example, 28.4 percent of all the limit order books' preannouncement period depths in the direction of the announcement are located in the lowest 20 percent of their respective distributions. Second, the **depth** contributions increase substantially after the announcement as seen by the increase in the **depth** contributions of all liquidity providers in the postannouncement period. Third, although both sides of the preannouncement period posted quotes are small relative to their distribution, there is more of a reduction in the **depth** in the direction of the announcement which is consistent with the specialist having some knowledge of the future price.

(TABULAR DATA FOR TABLE VII OMITTED)

The direct evidence on the specialist's **depth** contribution is less convincing. The specialist's results suggest that the **depth** contributions prior to an earnings announcement, although somewhat smaller, are largely in line with their empirical distribution. It is important to note however, that most of the deviations from the null hypothesis occur in the leftmost portion of the cross-sectional distribution. This suggests that although the earnings announcement is an important information event for some stocks, for others it is not. This result may be a function of the inability to completely **screen** out cases where the information has

effectively "leaked," leading the earnings announcement data as a noninformation event.

In summary, the results provide evidence for the posited hypothesis in that, to a lesser extent, the specialist and, to a greater extent, the limit order book reduce their respective contributions to **depth** around the time (TABULAR DATA FOR TABLE VIII OMITTED) of an earnings announcement. Moreover, **depth** contributions by liquidity providers increase after the announcement is made. Finally, there is evidence that the quotes are lower in the direction of the announcement, reinforcing the idea that the specialist has some information about the pending announcement. These results are consistent with those reported by Lee et al. (1993) as well as by Foster and Viswanathan (1994) and Jennings (1994) who find low quoted **depth** prior to takeover announcements and a marked increase in quoted **depth** after takeover announcements.

The other information events that are tested are FOMC announcements concerning the desired Federal Funds rate. These FOMC announcements are an interesting complement to the earnings announcements because interest rate changes, unlike earnings announcements, allow an analysis of the effects of volatility without the confounding effects of asymmetric information.

Observations for the January 9, 1991, FOMC announcement are reported in Table VIII.(15) Contrary to the preceding table, Table VIII segments the results into **bid** and **ask** sides. These results are similar to the earnings announcement results in that there are substantial numbers of very small **depth** contributions for the specialist, limit order book, and posted quotes. For the preannouncement period, the specialist's contribution is lowest on the **bid** side and the limit order book's contribution is lowest on the **ask** side. As an example, 28.7 percent (20.3 percent) of the specialists' preannouncement period **bid** (**ask**) depths fall in the lowest 20 percent of their respective distributions. In the postannouncement period the situation reverses itself: specialists restrict **depth** at the **ask** and the limit order book restricts **depth** at the **bid**. Moreover, the postannouncement period shows increases in **depth** contribution for both the specialist and the limit order book, although the increase tends to be smaller for the specialist. These results demonstrate that in addition to managing depths to mitigate adverse selection problems, liquidity providers also manage depths to minimize the uncertainty associated with volatility **trading** periods.

Admittedly, the statistical results are clouded by some unavoidable difficulties associated with this test. First, the test focuses on two uses specialists may have for **depth**: reducing adverse selection costs or reducing the uncertainty associated with periods of volatile **trading**. There are, however, other uses that are not accounted for. For instance, the specialist may use quoted **depth** to manage inventory or to promote price discovery. These effects, if counter to reducing adverse selection costs or reducing volatility costs, would tend to mask the significance of these results. Unfortunately, controlling for these effects is not possible due to a lack of data. Second, information events occur all the time. To the extent that other announcements occur simultaneously, especially for earnings announcements which are made at varying dates and times, the test cannot hope to compare the earnings announcement separately from a noninformation event period. Rather, both the announcement period **depth** and the empirical distribution incorporate the effect of other information events. Third, orders not placed through one of the automated routing systems are missing from the limit order book estimates. This may cause a misestimation (overstatement) of the **depth** that the specialist is providing. For example, suppose a limit order is brought to the **trading** post by a floor broker for 10,000 shares at nine dollars and the order happens to be the best limit order on the sellside of the limit order book. This order is not included in the data because it was not submitted through one of the automated routing systems. If the specialist is posting an **ask** of nine dollars and an **ask** **depth** of 10,000 shares then in reality the specialist is supplying no **depth**. However, because the limit order book estimates lack the information on this order, the specialist would be credited with supplying a **depth** of 10,000 shares. This may be one reason some of the announcement observations are unusually large relative to the unconditional distribution. Even with the associated problems with the test and the data, the results still present strong evidence for the hypothesis

that liquidity providers reduce contributed **depth** prior an information event in order to reduce adverse selection costs or reduce the costs associated with volatile **trading** periods.

#### IV. Conclusion

This paper demonstrates that depths are used as a strategic choice variable by the specialist. Specifically, by lowering the **depth** quotes to reflect only the interest in the limit order book, the specialist can pass off unwanted trades onto the limit order book. Furthermore, evidence is presented that supports both inventory concerns as well as adverse selection/information concerns as the catalyst behind the specialist's actions. Finally, the statistical tests show that liquidity providers reduce their contribution to **depth** around the time of an information event, whether it is to reduce adverse selection costs in the case of earnings announcements or reduce the costs associated with volatility in the case of FOMC announcements.

#### Appendix

The following exhibit is the estimated limit order book for Federal Express on November 21, 1990, at 12:00 noon. The exhibit is organized with sell orders in the upper left corner and buy orders in the lower right corner. The limit orders are listed in increasing price/time priority on the **ask** side and decreasing price/time priority on the **bid** side. Each order specifies the date and time (if known) of placement, the side of the **market** (regular sell orders (SEL), short-sales (SST), and buy orders (BUY)), the duration of the order (good-until-canceled (GTC) and DAY), the number of shares, and the limit price. (The time of placement is not known for orders placed prior to the start of the database.) Between the buy and sell limit orders the prevailing NYSE quote and the best non-NYSE quote are listed. The quotes **display** the **ask depth**, **ask**, **bid**, and **bid depth**, respectively.

The specialist is providing liquidity only on the **bid** side of the **market**. On the sell side, the two best limit orders at 32 3/8 totaling 2,100 shares are more than the **ask depth** posted by the specialist. In contrast, the specialist is posting a **bid depth** of 5,000 shares, 1,100 of which are attributed to the limit order book. The additional 3,900 shares are attributed to either the specialist or floor traders.

(TABULAR DATA FOR EXHIBIT A.I OMITTED)

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1 There is also a growing empirical literature on limit order books; however, this literature's primary focus has been pure limit order book markets rather than specialist markets. Examples include: Niemeyer and Sandas (1993), Stockholm; Hedvall (1994), Helsinki, Lehmann and Modest (1994), Tokyo; Niemeyer (1994) Helsinki/Stockholm; Biais, Hillion and Spatt (1995), Paris; Frino and McCorry (1995), Australia; Hamao and Hasbrouck (1995), Tokyo; de Jong, Nijman and Roell (1995), Paris; Hollifield, Miller, Sandas (1996), Stockholm; and Sandas (1998), Stockholm.

2 The limit order book is so named because originally it was a ledger that the specialist carried to log limit orders.

3 These data do not give an estimate of the specialist's inventory.

4 Decile rankings are also done using CRSP data on **market** capitalization at the 1990 year **end**. Although the results are largely the same under either ranking mechanism, **trading** activity seems to be a better predictor of limit order book properties.

5 Executions are handled before cancellations because execution records provide more fields to match with the original order; therefore, it is harder to mismatch an execution than it is to mismatch a cancellation.

6 There are partial executions and partial cancellations. This entails an execution or cancellation of a fraction of the original order, where the residual order remains as an active limit order.

7 Estimates are calculated at the time of the opening quote and each half-hour on the half-hour thereafter. For example, if a stock opens at

9:40:28 a.m., an estimate is taken at that time and then estimates are done at 10:00:00, 10:30:00, etc. The number of limit order books for each stock is approximate because occasional late openings (later than 10:00:00) cause differences in the number of estimates for each stock.

8 The significantly larger volume in the "Large" decile is driven by six stocks: Boeing (BA), General Electric (GE), International Business Machines (IBM), Philip Morris (MO), American Telephone and Telegraph (T), and Exxon (XON). These are the only stocks in the sample included in the Dow Jones Industrial Average.

9 Greene (1996) provides an algorithm to infer transactions crossed with the limit order book. Assuming the specialist is likely to adjust his **depth** quote when he is reflecting some portion of the **depth** on the limit order book and that **depth** is subsequently altered, we see that the percentages obtained from summing columns 1, 2, and 3 of Table IV are broadly in line with the 77.36 percent (mean) and 50 percent (minimum) success rate of his algorithm.

10 Cao, Choe, and Hatheway (1997) and Corwin (1998) argue that there are important differences in the behavior of specialist firms. In principle, differences in the choice to reflect the limit order book in the posted price schedule could be driven by this effect; however, 34 specialist firms are represented in the TORQ sample with no one specialist firm maintaining a majority in any one decile.

11 The **trading** strategy is also executed conditioning on two and four consecutive half-hour periods. The results are both qualitatively and quantitatively similar to the results shown.

12 Open **market** operations were conducted to implement a reduction in the Federal Funds rate of 25 basis points on November 14, 1990, December 7, 1990, December 19, 1990, and January 9, 1991. The movement on December 19, 1990, was accompanied by a reduction in the discount rate of 50 basis points. Of further note is that Federal Open **Market** Committee meetings were held on November 13, 1990, and on December 17 and 18, 1990.

13 There are various reasons for eliminating stocks. I am unable to determine the exact time of the announcement for one of the stocks. Two stocks, one having its announcement on November 1, 1990, and the other on January 31, 1991, have insufficient observations before or after the announcement to properly perform the test. The remaining two stocks are eliminated because the firms preempted the official announcement with a preliminary announcement.

14 Value Line forecasts were unavailable for 17 (20 percent) of the 83 stocks.

15 Results for the other three FOMC announcements are similar to those shown in Table VIII but are not shown for brevity. The January 9, 1991, announcement was chosen for **display** for two reasons. First, announcements made on November 14 and December 19 follow scheduled FOMC meetings and could have been anticipated by the **market**, those on December 7 and January 9 provide cases with potentially more uncertainty. Second, fewer of the earnings announcements occur in January than either in November or in December, making January a period with the fewest competing announcements.

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Items	File
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1	13: BAMP_2003/Dec W3
12	15: ABI/Inform(R)_1971-2004/Jan 10
8	16: Gale Group PROMT(R)_1990-2004/Jan 13
5	20: Dialog Global Reporter_1997-2004/Jan 13
5	47: Gale Group Magazine DB(TM)_1959-2004/Jan 05
3	75: TGG Management Contents(R)_86-2004/Jan W1
Examined 50	files
6	88: Gale Group Business A.R.T.S._1976-2004/Jan 13
1	98: General Sci Abs/Full-Text_1984-2003/Nov
5	141: Readers Guide_1983-2003/Nov
22	148: Gale Group Trade & Industry DB_1976-2004/Jan 13
Examined 100	files
11	180: Federal Register_1985-2004/Jan 12
1	211: Gale Group Newsearch(TM)_2004/Jan 12
Examined 150	files
3	262: CBCA Fulltext_1982-2004/Jan
9	275: Gale Group Computer DB(TM)_1983-2004/Jan 13
Examined 200	files
1	348: EUROPEAN PATENTS_1978-2004/Jan W01
43	349: PCT FULLTEXT_1979-2002/UB=20031225,UT=20031218
Examined 250	files
1	436: Humanities Abs Full Text_1984-2003/Nov
7	484: Periodical Abs Plustext_1986-2004/Jan W1
4	485: Accounting & Tax DB_1971-2004/Jan W1
Examined 300	files
2	619: Asia Intelligence Wire_1995-2004/Jan 12
Examined 350	files
2	636: Gale Group Newsletter DB(TM)_1987-2004/Jan 13
120	654: US Pat.Full._1976-2004/Jan 08
4	660: Federal News Service_1991-2002/Jul 02
Examined 400	files
1	727: Canadian Newspapers_1990-2004/Jan 13
1	759: Reuters Business Insight_1992-2003/Dec
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/590,692	06/09/2000	Gary Allan Kemp II	024051/0135	2769

TITLE OF INVENTION: CLICK BASED TRADING WITH INTUITIVE GRID DISPLAY OF MARKET DEPTH

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/590,692	06/09/2000	Gary Allan Kemp II	024051/0135	2769

TITLE OF INVENTION: CLICK BASED TRADING WITH INTUITIVE GRID DISPLAY OF MARKET DEPTH

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$25	\$0	\$25	05/10/2004

EXAMINER	ART UNIT	CLASS-SUBCLASS
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(Authorized Signature)	(Date)
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**NOTE:** The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Alexandria, Virginia 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Alexandria, Virginia 22313-1450.**

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TRANSMIT THIS FORM WITH FEE(S)



UNITED STATES PATENT AND TRADEMARK OFFICE

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P.O. Box 1450  
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/590,692	06/09/2000	Gary Allan Kemp II	024051/0135	2769
22428	7590	02/10/2004	EXAMINER WEISBERGER, RICHARD C	
FOLEY AND LARDNER SUITE 500 3000 K STREET NW WASHINGTON, DC 20007			ART UNIT      PAPER NUMBER 3624	

DATE MAILED: 02/10/2004

**Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)**  
(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 0 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 0 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) system (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (703) 305-1383. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at (703) 305-8283.

**Notice of Allowability**

Application No.

09/590,692

Examiner

Richard C. Weisberger

Applicant(s)

KEMP ET AL.

Art Unit

3624

*MW*

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

- 1.  This communication is responsive to amendment, terminal disclaimer and interview summary.
- 2.  The allowed claim(s) is/are 22-70 and 89-95.
- 3.  The drawings filed on 12 August 2002 are accepted by the Examiner.
- 4.  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a)  All    b)  Some\*    c)  None    of the:
    - 1.  Certified copies of the priority documents have been received.
    - 2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    - 3.  Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- \* Certified copies not received: \_\_\_\_\_.
- 5.  Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
  - (a)  The translation of the foreign language provisional application has been received.
- 6.  Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

- 7.  A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
- 8.  CORRECTED DRAWINGS must be submitted.
  - (a)  including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1)  hereto or 2)  to Paper No. \_\_\_\_\_.
  - (b)  including changes required by the proposed drawing correction filed \_\_\_\_\_, which has been approved by the Examiner.
  - (c)  including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the top margin (not the back) of each sheet. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

- 9.  DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- 1  Notice of References Cited (PTO-892)
- 3  Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 5  Information Disclosure Statements (PTO-1449), Paper No. \_\_\_\_\_
- 7  Examiner's Comment Regarding Requirement for Deposit of Biological Material
- 2  Notice of Informal Patent Application (PTO-152)
- 4  Interview Summary (PTO-413), Paper No. \_\_\_\_\_
- 6  Examiner's Amendment/Comment
- 8  Examiner's Statement of Reasons for Allowance
- 9  Other

***Allowable Subject Matter***

1. The following is an examiner's statement of reasons for allowance: The following is an examiner's statement of reasons for allowance: This statement of reasons for allowance includes the major differences in the claims not found in the prior art of record and reasons why that differences are considered to define patentably over the prior art. The statement is not intended to necessarily state all the reasons for allowance or all the details why claims are allowed and should not be relied upon for this purpose. Rather, this statement reflects what the examiner considers important and therefore the primary reasons for the allowance of the claims.

The primary reason for allowance is the limitation directed to the "dynamic display" of a plurality of the quantity of bids and asks aligned with a "static display" of corresponding prices. Here, 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. With this display of market depth, claimed in each of the independent claims, a trader places a trade order with the pointer in the area of the order entry region of the dynamic market depth region, through a single computer implemented action, see Figures 3 and 4. For example, in figure 3, a click on Bid Q 18 will send an order to the market to sell 17 lots of the commodity at a price of 89.

The closest prior art including US Patent 6,408,282, PCT WO 01/16852 and commonly owned non-patent literature "X Trader" (see, applicant's response to USPTO's request for information) all lack this feature. The PTO also inquired as to the subject matter of alleged infringement referenced in applicant's petition to make

Art Unit: 3624

special. The USPTO found no evidence of public use or any printed publication of the system known as J Trader, the subject matter of potential infringement and the applicant's basis for his petition to make special, earlier than November 6, 2000.

Therefore, the USPTO has concluded that the system known as J trader is not prior art to the instant application which has a filing date of June 06, 2000.

2. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Respectfully

By, \_\_\_\_\_

Richard Weisberger

NW

<b>Notice of References Cited</b>	Application/Control No. 09/590,692	Applicant(s)/Patent Under Reexamination KEMP ET AL.	
	Examiner Richard C Weisberger	Art Unit 3624	Page 1 of 1

**U.S. PATENT DOCUMENTS**

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
	A US-			
	B US-			
	C US-			
	D US-			
	E US-			
	F US-			
	G US-			
	H US-			
	I US-			
	J US-			
	K US-			
	L US-			
	M US-			

**FOREIGN PATENT DOCUMENTS**

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N				
	O				
	P				
	Q				
	R				
	S				
	T				

**NON-PATENT DOCUMENTS**

*	Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
U	Pasystems News Release, PATSYSTEMS LAUNCHES J TRADER, November 06 2001.
V	
W	
X	

\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).) Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

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Substitute for form 1449B/PTO <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> Date Submitted: November 12, 2003 (use as many sheets as necessary)				<i>Complete if Known</i>	
Application Number		09/590,692			
Filing Date		06/09/2000			
First Named Inventor		Gary Allan Kamp II			
Group Art Unit		3624			
Examiner Name		R. Weisberger			
Attorney Docket Number		024051-0135			
Sheet	1	of	1		

U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (if known)			

FOREIGN PATENT DOCUMENTS								
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Name of Patentee or Applicant of Cited Documents	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>8</sup>
		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)				
	A1	PCT	WO 88/49839		11/05/1998			
	A2	PCT	WO 99/19821		04/22/1999			
	A3	PCT	WO 99/53424		10/21/1999			

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.			T <sup>8</sup>

Examiner Signature		Date Considered	
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 809. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> See attached Kinds of U.S. Patent Documents. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

<sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 18 if possible. <sup>8</sup> Applicant is to place a check mark here if English language translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, D.C. 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Appropriate Department, Patent and Trademark Office, P.O. Box 1473, Alexandria, VA 22304-1473.

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Substitute for form 1449B/PTO <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  Date Submitted: November 12, 2002  (use as many sheets as necessary)		<b>Complete if Known</b>	
		<b>Application Number</b>	09/590,692
		<b>Filing Date</b>	06/09/2000
		<b>First Named Inventor</b>	Gary Allan Kemp II
		<b>Group Art Unit</b>	3624
		<b>Examiner Name</b>	R. Weisberger
		<b>Attorney Docket Number</b>	024051-0135
Sheet	1	of	1

**U.S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (if known)			
	A1	5,077,665		SILVERMAN et al.	12/31/1991	
	A2	5,136,501		SILVERMAN et al.	08/04/1992	
	A3	2002/0023038		FRITSCH et al.	02/21/2002	
	A4	6,408,282		BUIST	06/18/2002	

**FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Name of Patentee or Applicant of Cited Documents	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)				
	A5		WO 00/52619		PCT	09/08/2000		
	A6		WO 00/62187		PCT	10/19/2000		
	A7		WO 01/16852		PCT	03/08/2001		

**OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) as a page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>6</sup>

Examiner Signature	Date Considered	12/03
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> See attached Kinds of U.S. Patent Documents. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

<sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

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MODIFIED PTO/SB/08 (08-00)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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Substitute for form 1449B/PTO		<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>		Application Number	09/590,892
		Filing Date	06/09/2000
Date Submitted: October 20, 2003 <i>(use as many sheets as necessary)</i>		First Named Inventor	Gary Allan Kemp II
		Group Art Unit	3824
Sheet	1	of	1
		Examiner Name	R. Weisberger
		Attorney Docket Number	024051-0135

U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (if known)			
	A1	4,903,201		WAGNER	02/20/1990	
	A2	5,101,353		LUPIEN et al.	03/31/1992	
	A3	5,946,667		TULL, JR. et al.	08/31/1999	
	A4	6,035,287		STALLAERT et al.	03/07/2000	
	A5	2002/0138401	A1	ALLEN et al.	09/26/2002	

FOREIGN PATENT DOCUMENTS								
Examiner Initials*	Cite No.	Foreign Patent Document			Name of Patentee or Applicant of Cited Documents	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)				
	A6	PCT	WO 95/26005	A1	S. H. BELZBERG	09/28/1995		
	A7	PCT	WO 99/30259	A1	NIPPON STEEL CORPORATION	08/17/1999		

**NON PATENT LITERATURE DOCUMENTS**

Examiner Signature		Date Considered	1/24
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> See attached Kinds of U.S. Patent Documents. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

<sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 18 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, PO Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, PO Box 1450, Alexandria, Virginia 22313-1450.

**Interview Summary**

Application No. 09/590,692	Applicant(s) KEMP ET AL.	
Examiner Richard C Weisberger	Art Unit 3624	<i>mw</i>

All participants (applicant, applicant's representative, PTO personnel):

- (1) Richard C Weisberger. (3) \_\_\_\_\_  
(2) Steven Borsand. (4) \_\_\_\_\_

Date of Interview: 9/03.

Type: a)  Telephonic b)  Video Conference  
c)  Personal [copy given to: 1)  applicant 2)  applicant's representative]

Exhibit shown or demonstration conducted: d)  Yes e)  No.  
If Yes, brief description: \_\_\_\_\_.

Claim(s) discussed: all.

Identification of prior art discussed: \_\_\_\_\_.

Agreement with respect to the claims f)  was reached. g)  was not reached. h)  N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: The PTO inquired as to the identity of the infringing party referenced in the applicant's petition to make special. Applicant referred to System known as J Trader and asserted that he was unaware of any printed publications or public use of the J trader system prior to the filing date of the instant application.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

\_\_\_\_\_  
Examiner's signature, if required

## Summary of Record of Interview Requirements

### Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

#### Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

##### Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

#### 37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,  
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

#### Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

#29

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Attorney Docket No. 024051/0135

Applicant: Gary Alan KEMP II et al.  
 Title: CLICK BASED TRADING WITH INTUITIVE GRID  
 DISPLAY OF MARKET DEPTH  
 Application No.: 09/590,692  
 Filing Date: June 9, 2000  
 Examiner: R. Weisberger  
 Art Unit: 3624  
 Allowed: February 10, 2004

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Commissioner for Patents  
 P.O. Box 1450  
 Alexandria, Virginia 22313-1450

Sir:

Foley & Lardner and the attorneys of record hereby authorize Anne Murphy or Karen Robertson to inspect the above-identified patent application and make copies of papers in the file of this application.

*Approved 3/3/04*  
*Gayrell Ellis*  
 \_\_\_\_\_  
 MARCH 2, 2004

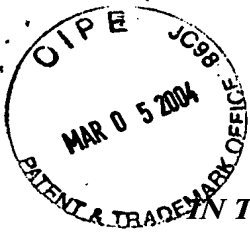
Date

Respectfully submitted,

*WTE*  
 \_\_\_\_\_  
 Reg No 4151A

William T. Ellis  
 Registration No. 26,874

FOLEY & LARDNER LLP  
 Customer Number: 22428  
 Telephone: (202) 672-5300  
 Facsimile: (202) 672-5399



Atty. Dkt. No. 024051-0135

DAC  
#30

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Gary Alan KEMP II et al.

Title: CLICK BASED TRADING WITH INTUITIVE GRID  
DISPLAY OF MARKET DEPTH

**RECEIVED**

Appl. No.: 09/590,692

MAR 09 2004

Filing Date: 06/09/2000

OFFICE OF PETITIONS

Examiner: R. Weisberger

Art Unit: 3624

Confirmation No.: 2769

**REQUEST FOR RECONSIDERATION OF  
PATENT TERM ADJUSTMENT UNDER 35 U.S.C. §154 (b)**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Applicants are in receipt of the Notice of Allowance dated February 10, 2004, allowing claims 22 - 70 and 89 - 95 and thank the Examiner for same. However, Applicants disagree with the Determination of Patent Term Adjustment under 35 USC 154(b) and present the following facts to support their contention that the patent term reward should be 443 days instead of 0 days.

Bases for the Adjustment: The correct patent term adjustment should be 443 days. Applicants believe that the additional 443 days are due based on 425 days beginning thirty (30) days after the filing of Applicants' Request for Continued Examination submitted to the Patent and Trademark Office (December 12, 2002) and receipt of the Notice of Allowance on February 10, 2004. These 425 days should be added to the PTO delay calculation. Applicants further believe that the calculation of Applicants' Total Delay is incorrectly set forth as 231 days instead of 154 days as

03/09/2004 MBIZUNE2 00000177 09590692

01 FC:1455

200.00 OP

indicated by our Patent Term Adjustment Calculation System (a copy of which is attached). Applicants received a Notice to File Missing Parts mailed August 3, 2000 and timely responded to this request on October 2, 2000. Therefore, the PTO incorrectly set forth a 46 day delay for responding to such. Applicants further believe that the PTO's calculation of 154 days delay between October 12, 2001 and March 12, 2002 is in error. Accordingly, Applicants should be granted an additional 443 days of patent term.

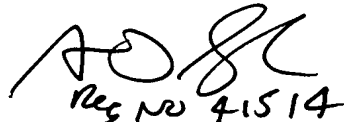
37 C.F.R. § 1.705(b)(2)(iii) statement: The above referenced file is the subject of a terminal disclaimer filed October 20, 2003 for Serial No. 09/590,692 and the related application Serial No. 09/894,637 both pending.

37 C.F.R. § 1.705(b)(2)(iv) statement: There were no circumstances constituting a failure to engage in reasonable efforts to conclude processing or examination of such application as set forth in § 1.704.

Enclosed with this request is the fee of \$200.00 as set forth in 37 C.F.R. §1.18(e). Furthermore, the Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741.

Respectfully submitted,

By



Reg No 41514

Date: March 5, 2004

FOLEY & LARDNER LLP  
Customer Number: 22428  
Telephone: (202) 672-5485  
Facsimile: (202) 672-5399

William T. Ellis  
Attorney for Applicant  
Registration No. 26,874

Patent Term Adjustment Calculation System



Add a new event to this case

Docket Number: 024051-0135  
 Application Number: 09/590692  
 Patent Number: N/A

	Event Description	Event Date	Days from Filing	PTO Days	Applicant Days
Edit Delete	Application Filing Date	06/09/2000	0		
Edit Delete	Notice to File Missing Parts	08/03/2000	55		
Edit Delete	Response to Notice to File Missing Parts	10/02/2000	115		
Edit Delete	PTO Action Response Received at PTO	03/13/2001	277		
CLOSE WINDOW	ALL CASES SELECT CASE				
Edit Delete	PTO Action	06/08/2001	364		
	PTO Action + 3 months	09/08/2001	456		
Edit Delete	PTO Action Response Received at PTO	10/09/2001	487		31
	PTO Action Response Received at PTO + 4 months	02/09/2002	610		
Edit Delete	Notice of Allowance	07/31/2002	782	172	
Edit Delete	Issue Fee Paid	08/12/2002	794		
Edit Delete	Post-Allowance Document Received at PTO	08/12/2002	794		
Edit Delete	Request For Continued Examination	11/12/2002	886		
	PTO Action Response Received at PTO + 4 months	12/12/2002	916		
	Post-Allowance Document Received at PTO + 4 months	12/12/2002	916		123
Edit Delete	Notice of Allowance	02/10/2004	1,341	425	
	Projected Patent Grant Date	08/24/2004	1,537		
				<b>Totals:</b>	<b>597</b>
				<b>PTA:</b>	<b>443</b>
					<b>154</b>

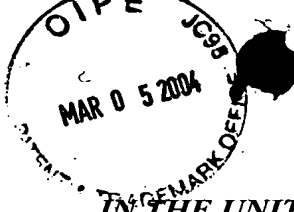
**RECEIVED**  
 MAR 09 2004  
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Created and maintained by



LOGIN: Karyn-Ruth Crawley IP: 10.31.8.222

Foley & Lardner LLP



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Gary Alan KEMP II et al.

Title: CLICK BASED TRADING WITH INTUITIVE GRID DISPLAY OF MARKET DEPTH

Appl. No.: 09/590,692

**RECEIVED**

Filing Date: 06/09/2000

**MAR 09 2004**

Examiner: R. Weisberger

**OFFICE OF PETITIONS**

Art Unit: 3624

Confirmation No.: 2769


**APPLICANTS' STATEMENT ON SUBSTANCE OF INTERVIEW**

Commissioner for Patents  
PO Box 1450  
Alexandria, Virginia 22313-1450

Sir:

Having reviewed the Interview Summary mailed on February 10, 2004 in the above-captioned application file, based on the telephonic Interview conducted on September 1, 2003, Applicants make the following clarifying remarks. Applicants agree with the substance of the Interview Summary as described by the Examiner. Applicants further point out for clarification that the product identified by Applicants that was referenced in the petition to make special in this case was the "DOME" screen of the J-Trader product.

Respectfully submitted,

By   
By no 41514

Date: March 5, 2004

FOLEY & LARDNER  
Customer Number: 22428  
Telephone: (202) 672-5485  
Facsimile: (202) 672-5399

William T. Ellis  
Attorney for Applicant  
Registration No. 26,874



PTO  
MAR 0 5 2004  
U.S. PATENT & TRADEMARK OFFICE

Atty. Dkt. No. 024051-0135

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Gary Alan KEMP II et al.

Title: CLICK BASED TRADING WITH INTUITIVE GRID  
DISPLAY OF MARKET DEPTH

Appl. No.: 09/590,692

Filing Date: 06/09/2000

Examiner: R. Weisberger

Art Unit: 3624

Confirmation No.: 2769

RECEIVED

MAR 09 2004

OFFICE OF PETITIONS

**REQUEST FOR CLARIFICATION**

Commissioner for Patents  
PO Box 1450  
Alexandria, Virginia 22313-1450

Sir:

We have recently received the Notice of Allowance in the above-identified case. In reviewing the Form PTO-37, the undersigned notes that the number of allowed Claims is listed as 54; Claims 22-70 and 89-93.

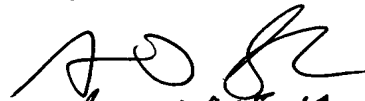
The allowed Claims are Claims 22-70 and Claims 89-95, the correct number of allowed claims is 56.

Therefore, it is requested that the Examiner issue corrected Form PTO-37, indicating that the number of allowed Claims in the application is 56, Claims 22-70 and Claims 89-95.

Respectfully submitted,

Date: March 5, 2004

By

  
MAR 05 2004

FOLEY & LARDNER LLP  
Customer Number: 22428  
Telephone: (202) 672-5485  
Facsimile: (202) 672-5399

William T. Ellis  
Attorney for Applicant  
Registration No. 26,874

**PART B - FEE(S) TRANSMITTAL**

Complete and send this form, together with applicable fee(s), to: **Mail**

**Mail Stop ISSUE FEE  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
or Fax (703) 746-4000**

**INSTRUCTIONS:** This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 4 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Legibly mark-up with any corrections or use Block 1)

22428 7590 02/10/2004  
FOLEY AND LARDNER  
SUITE 500  
3000 K STREET NW  
WASHINGTON, DC 20007



Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

**Certificate of Mailing or Transmission**

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/590,692	06/09/2000	Gary Allan Kemp II	024051/0135	2769

TITLE OF INVENTION: CLICK BASED TRADING WITH INTUITIVE GRID DISPLAY OF MARKET DEPTH

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$25	\$0	\$25	05/10/2004

EXAMINER	ART UNIT	CLASS-SUBCLASS
WEISBERGER, RICHARD C	3624	705-037000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.

2. For printing on the patent front page, list (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

- 1 FOLEY & LARDNER
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. Inclusion of assignee data is only appropriate when an assignment has been previously submitted to the USPTO or is being submitted under separate cover. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Trading Technologies  
International, Inc.

Chicago, IL

Please check the appropriate assignee category or categories (will not be printed on the patent);  individual  corporation or other private group entity  government

4a. The following fee(s) are enclosed:

- Issue Fee
- Publication Fee
- Advance Order - # of Copies \_\_\_\_\_

4b. Payment of Fee(s):

- A check in the amount of the fee(s) is enclosed.
- Payment by credit card. Form PTO-2038 is attached.
- The Director is hereby authorized by charge the required fee(s), or credit any overpayment, to Deposit Account Number 19-0741 (enclose an extra copy of this form).

Director for Patents is requested to apply the Issue Fee and Publication Fee (if any) or to re-apply any previously paid issue fee to the application identified above.

(Authorized Signature) William T. Ellis 41514 (Date) 3/8/04  
William T. Ellis, Reg. #26,874 3/8/2004

Adjustment date: 03/12/2004 AWONDAF2  
08/14/2002 BNGUYEN2 00000107 09590692  
01 FC:242 -640.00 OP

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Alexandria, Virginia 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

03/12/2004 AWONDAF2 00000043 09590692  
01 FC:2501 665.00 OP

TRANSMIT THIS FORM WITH FEE(S)

**PART B - FEE(S) TRANSMITTAL**

Complete and send this form, together with applicable fee(s), to: **Mail**

**Mail Stop ISSUE FEE  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
(703) 746-4000**

or **Fax**

**INSTRUCTIONS:** This form should be used for transmitting the **ISSUE FEE**, and **PUBLICATION FEE** (if required). Blocks 1 through 4 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

**CURRENT CORRESPONDENCE ADDRESS** (Note: Legibly mark-up with any corrections or use Block 1)

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22428 7590 02/10/2004

**FOLEY AND LARDNER  
SUITE 500  
3000 K STREET NW  
WASHINGTON, DC 20007**



**Certificate of Mailing or Transmission**

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/590,692	06/09/2000	Gary Allan Kemp II	024051/0135	2769

**TITLE OF INVENTION:** CLICK BASED TRADING WITH INTUITIVE GRID DISPLAY OF MARKET DEPTH

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$25	\$0	\$25	05/10/2004

EXAMINER	ART UNIT	CLASS-SUBCLASS
WEISBERGER, RICHARD C	3624	705-037000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

"Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.

2. For printing on the patent front page, list (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 FOLEY & LARDNER

2 \_\_\_\_\_

3 \_\_\_\_\_

**3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT** (print or type)

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(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

**Trading Technologies  
International, Inc. Chicago, IL**

Please check the appropriate assignee category or categories (will not be printed on the patent);  individual  corporation or other private group entity  government

4a. The following fee(s) are enclosed:

- Issue Fee
- Publication Fee
- Advance Order - # of Copies \_\_\_\_\_

4b. Payment of Fee(s):

- A check in the amount of the fee(s) is enclosed.
- Payment by credit card. Form PTO-2038 is attached.
- The Director is hereby authorized by charge the required fee(s), or credit any overpayment, to Deposit Account Number 19-0741 (enclose an extra copy of this form).

Director for Patents is requested to apply the Issue Fee and Publication Fee (if any) or to re-apply any previously paid issue fee to the application identified above.

(Authorized Signature) [Signature] (Date) 3/8/04  
**William T. Ellis, Reg. #28,874 3/8/2004**

Adjustment date: 03/12/2004 AWONDAF2  
08/14/2002 BNGUYEN2 00000107 09590692  
01 FC:242 -640.00 OP

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

03/12/2004 AWONDAF2 00000043 09590692  
01 FC:2501 665.00 OP

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Alexandria, Virginia 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Alexandria, Virginia 22313-1450.**

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09/330,092      06/09/2000      Gary Alan Kemp II      024001 0155      2769

22428      7590      06/10/2004

FOLEY AND LARDNER  
SUITE 500  
3000 K STREET NW  
WASHINGTON, DC 20007

EXAMINER

WEISBERGER, RICHARD C

ART UNIT      PAPER NUMBER

3624

31

DATE MAILED: 06/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PAPER #31  
IS INCOMPLETE



Paper No. 32

Foley & Lardner  
Suite 500  
3000 K Street NW  
Washington, DC 20007

**COPY MAILED**

JUN 14 2004

Page 1

**OFFICE OF PETITIONS**

In re Application of  
Kemp II  
Application No. 09/590,692  
Filed: June 9, 2000  
Attorney Docket No. 024051-0135

:  
: DECISION GRANTING REQUEST FOR  
: PTA RECONSIDERATION  
:  
:

This decision is in response to applicants' "REQUEST FOR RECONSIDERATION OF PATENT TERM ADJUSTMENT UNDER 35 U.S.C. § 145(b)" timely<sup>1</sup> file on March 5, 2004 request that the Office deem the proper PTA amount at the time of the mailing of the notice of allowance as 443 days rather than the zero (0) day determination provided by the office.

The applicants; request for reconsideration of patent term adjustment is **Granted to the extent herein indicated.** Applicants are entitled to **TWO HUNDRED AND NINETEEN (219) DAYS** of PTA at the time of the mailing of the notice of allowance. Applicants are given thirty days to petition this decision. The thirty day period is not extendable under 37 CFR 1.136.

Applicants assert that the Office erred in incorrectly asserting a forty-six (46) day reduction for the late submission of a response to the Notice to File Missing Parts<sup>2</sup> under 37 CFR 1.704(b) and the one hundred and fifty-four day delay for the submission of a supplemental paper ( i.e., IDS filed on March 12, 2002.. Applicants assert that they did not fail to engage in reasonable efforts to conclude process of the application.

A review of the file reveals that the Office failed to the meet the requirement of responding to the Request for Continued Examination (RCE) filed November 12, 2003 (RCE), until February 10, 2004, a 335 day delay.<sup>2</sup> In addition, the Office further did not meet the requirement of the application under under 1.702(a)(2) by filing a late reply to applicants response rejection, a one

---

<sup>1</sup>Issue fee paid on 3-8-04.

<sup>2</sup>Pursuant to 37 CFR 11.704(b), the reduction began the day afterfour-months from the receipt of the and ended on the date of the mailing of the Notice of Allowance on February 10, 2004. The Office notes for the record that the entry of an RCE on March 19, 2003 was an error in that the document was only a copy of the RCE filed on November 12, 2002.

Application No. 09/590,632

hundred and seventy-two (172) day delay.<sup>3</sup> Accordingly, the Office accumulated a total of five hundred and seven (507) days of administrative delay.

The Office further agrees with applicant that the forty-six (46) day reduction for the response to the missing parts is in error. The file record reflects that the Office did in fact receive applicants' response to the Notice to File Missing Parts within three months. However, applicants assertion that the one hundred and fifty-four day reduction is not a failure to engage in reasonable efforts to conclude prosecution of the application is not persuasive. Applicant submitted a supplemental paper, Information Disclosure Statement (IDS)<sup>4</sup>, on March 12, 2002 after the initial response by applicant and prior to an Office response, a one hundred and fifty-four (154) day reduction.<sup>5</sup> Moreover, applicant submitted a second supplemental reply (IDS) on February 11, 2003 after the initial filing of a RCE in response to an Office act on November 12, 2002 and prior to any response by the Office, a ninety-one (91) day reduction.<sup>6</sup> In addition, The Office properly assessed a thirty-one (31) day reduction for an overdue reply to a non-final rejection dated June 8, 2001.<sup>7</sup> Finally, applicants filed an over three month response to the Office Mailing of a Notice of Allowance, a twelve (12) day reduction. Accordingly, applicants failed to engage in reasonable efforts to conclude prosecution of the application by a total period of two hundred and eighty eight (288) days. Accordingly the overall PTA determination at the time of the issuance of the patent is two hundred and nineteen days.

The Office has charged the \$200 fee to Deposit Account 19-0741. No additional fee is required by applicants.

This Application will be forwarded to the Office of Patent Publication for a prompt issuance of the application.

Karin Ferriter *Karin Ferriter*  
Senior Legal Advisor  
Office of Patent Legal Administration  
Office of Deputy Commissioner  
for Patent Examination Policy

Attachment: Copy of adjusted PTA determination

---

<sup>3</sup>The Office did not reply to applicant's response on October 9, 2001 until July 31, 2002.

<sup>4</sup>IDS was filed without a one-month certification statement under 37 CFR 1.704(d) and therefore the reduction is considered a failure to engage in reasonable efforts to conclude prosecution of the application under 37 CFR 1.704(c)(8).

<sup>5</sup>The reduction is for the time period between the dates of October 9, 2001 and March 12, 2002.

<sup>6</sup>IDS was filed without a one-month certification statement under 37 CFR 1.704(d) and therefore the reduction is considered a failure to engage in reasonable efforts to conclude prosecution of the application under 37 CFR 1.704(c)(8). The reduction occurring between the dates of November 13, 2002 and February 11, 2003.

<sup>7</sup>The reduction occurring beginning on August 9, 2001 and ending on October 9, 2002, a thirty-one day reduction.

**SOLICITOR**

AO 121 (6/90)

TO:	AUG 19 2004
COMMISSIONER OF PATENTS AND TRADEMARKS WASHINGTON, D.C. 20231	U.S. PATENT & TRADEMARK OFFICE REPORT ON THE FILING OF DETERMINATION OF AN ACTION OR APPEAL REGARDING A COPYRIGHT


In compliance with the Act of July 19, 1952 (66 Stat. 814; 35 U.S.C. 290) you are hereby advised that a court action has been filed on the following patent(s) in the U.S. District Court:

DOCKET NO. 04-cv-5312	DATE FILED August 12, 2004	UNITED STATES DISTRICT COURT, NORTHERN DISTRICT OF ILLINOIS, EASTERN DIVISION
PLAINTIFF Trading Technologies International, Inc		DEFENDANT eSpeed, Inc.
PATENT NO.	DATE OF PATENT	PATENTEE
6,766,304	7/20/04	Kemp, et al
6,772,132	8/3/04	Kemp, et al

In the above case, the following patent(s) have been included:

DATE INCLUDED	INCLUDED BY <input type="checkbox"/> Amendment <input type="checkbox"/> Answer <input type="checkbox"/> Cross Bill <input type="checkbox"/> Other Pleading			
PATENT NO.	DATE OF PATENT	PATENT		

In the above-entitled case, the following decision has been rendered or judgment issued:

DECISION/JUDGMENT		
CLERK Michael W. Dobbins	(BY) DEPUTY CLERK  Gregory Angstmar	DATE August 13, 2004

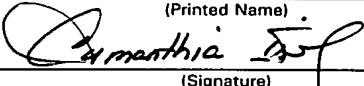
Copy 1 - Upon initiation of action, mail this copy to Commissioner Copy 3 - Upon termination of action, mail this copy to Commissioner  
Copy 2 - Upon filing document adding patent(s), mail this copy to Commissioner Copy 4 - Case file copy





IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Gary Alan KEMP II et al.  
 Title: CLICK BASED TRADING WITH INTUITIVE GRID DISPLAY OF MARKET DEPTH  
 Appl. No.: 09/590,692  
 Filing Date: 06/09/2000  
 Examiner: R. Weisberger  
 Art Unit: 3624

<b>CERTIFICATE OF FACSIMILE TRANSMISSION</b>	
I hereby certify that this paper is being facsimile transmitted to the United States Patent and Trademark Office, Washington, D.C. on the date below.	
Cymanthia Irving	
<small>(Printed Name)</small>	
	
<small>(Signature)</small>	
March 21, 2003	
<small>(Date of Deposit)</small>	

**AMENDMENT**

Commissioner for Patents  
Washington, D.C. 20231

Sir:

Please amend the application as follows:

**In the Specification:**

In accordance with 37 CFR § 1.121, please substitute for the paragraph starting on line 10 of page 17, the following rewritten version of the same paragraph, as amended. The changes are shown explicitly in the attached "Marked Up Version Showing Changes Made."

Using the screen display and values from Figure 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.

**In the Claims:**

In accordance with 37 CFR § 1.121, please substitute for claims 22, 23, 29, 30, and 35-40, the following rewritten versions of the same claims, as amended. The changes are shown explicitly in the attached "Marked Up Version Showing Changes Made."

Further, please add new claims 89-95 as indicated below.

22. (Amended) 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 of prices comprising a plurality of areas for receiving commands from the user input device 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 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.

23. (Amended) A method of placing a trade order according to claim 22, 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.

29. (Amended) 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.

30. (Amended) A computer readable medium having program code recorded thereon, for execution on a computer to place a trade order according to claim 29, 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.

35. (Amended) 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.

36. (Amended) A client system for placing a trade order for a commodity according to claim 35, 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.

37. (Amended) A client system for placing a trade order for a commodity according to claim 36, 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.

38. (Amended) A client system for placing a trade order for a commodity according to claim 36, 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.

39. (Amended) A client system for placing a trade order for a commodity according to claim 36, 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.

40. (Amended) A client system for placing a trade order for a commodity according to claim 39, 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.

89. (New) The method of claim 23, wherein the bid order entry region overlaps with a bid display region and the ask order entry region overlaps with an ask display region.

90. (New) A computer readable medium having program code recorded thereon, for execution on a computer to place a trade order according to claim 30, wherein the bid order entry region overlaps with a bid display region and the ask order entry region overlaps with an ask display region.

91. (New) A client system for placing a trade order for a commodity according to claim 36, wherein the bid order entry region overlaps with a bid display region and the ask order entry region overlaps with an ask display region.

92. (New) The method of claim 22 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.

93. The method of claim 92 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.

94. The method of claim 22 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.

95. The method of claim 22 wherein the plurality of additional parameters comprises a price and type of order.

**REMARKS**

Claims 22-88 were pending in the application. Claims 22, 23, 29, 30, and 35-40 have been amended. Claims 89-95 have been added. No new matter has been introduced. Thus, claims 22-95 are pending for consideration at this time.

Applicants thank the Examiner for the telephone interview of March 21, 2003. The pending claims have been amended as discussed. The discussion resulted in agreement that the claims as amended are allowable and that a Notice of Allowance would be issued promptly.

Applicants note that the amendments are being made without prejudice and solely in order advance prosecution of this application more rapidly to issuance.

Respectfully submitted,

By \_\_\_\_\_



Ankur D. Shah  
Attorney for Applicant  
Registration No. 41,514

Date March 21, 2003

FOLEY & LARDNER  
Customer Number: 22428



22428

PATENT TRADEMARK OFFICE

Telephone: (202) 672-5300

Facsimile: (202) 672-5399

Should additional fees be necessary in connection with the filing of this paper, or if a petition for extension of time is required for timely acceptance of same, the Commissioner is hereby authorized to charge deposit account No. 19-0741 for any such fees; and applicant hereby petitions for any needed extension of time.

**MARKED UP VERSION SHOWING CHANGES MADE**

**In the Specification:**

The paragraph starting on line 10 of page 17:

Using the screen display and values from Figure 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] 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 [buy] sell 17 lots at a price of 90.

**In the Claims:**

22. (Amended) 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 [and having preset parameters for trade orders], said method comprising:

setting a preset parameter for the trade order

displaying [the] market depth of [a] the commodity [traded in a market], 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 of prices comprising a plurality of areas for receiving commands from the user input device to send trade orders, each area corresponding to a price of the static display of prices; and

[initiating placement of a] selecting a particular area in the order entry region [trade order of the commodity] through a single action of the user input device with a pointer of the user input device positioned over [an] the particular area [in said dynamic displays of bids and asks] to set a plurality of additional parameters for the trade order and send the trade order to the electronic exchange;



wherein the contents of the trade order are based in part upon the preset parameters and the position of the pointer at the time of said single action].

23. (Amended) A method of placing a trade order according to claim 22, 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 [display] 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 [display] region.

29. (Amended) A computer readable medium having program code recorded thereon, for execution on a computer having a graphical user interface and a user input device [and having preset parameters for trade orders], 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 [first] second program code displaying [the] market depth of a commodity [traded in a market], 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 [second] fourth program code for [initiating placement of a trade order of the commodity through a single action of the user input device with a pointer of the user input device positioned over an area in said dynamic displays of bids and asks; and

a third program code for setting characteristics of the trade order based in part upon the preset parameters and the position of the pointer at the time of said single action] 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.

30. (Amended) A computer readable medium having program code recorded thereon, for execution on a computer to place a trade order according to claim 29, 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 [display] 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 [display] region.

35. (Amended) 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 [the] market depth of a commodity [traded in a market], 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 [said dynamic displays of bids and asks and for initiating placement of a trade order of the commodity through a single action of the user input device] the order entry region; and

a trade order [characteristics setting component for setting characteristics of the trade order based in part upon preset parameters and the position of the pointer at the time of said single action] 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.

36. (Amended) A client system for placing a trade order for a commodity according to claim 35, wherein said trade order [characteristics setting] 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 [display] 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 [display] region.

37. (Amended) A client system for placing a trade order for a commodity according to claim 36, wherein said trade order [characteristics setting] 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.

38. (Amended) A client system for placing a trade order for a commodity according to claim 36, wherein said trade order [characteristics setting] 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.

39. (Amended) A client system for placing a trade order for a commodity according to claim 36, wherein said trade order [characteristics setting] 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.

40. (Amended) A client system for placing a trade order for a commodity according to claim 39, wherein said trade order [characteristics setting] 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.

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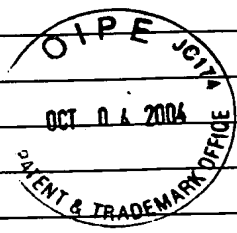
Notice of References Cited

Application/Control No.  
09/590,692  
Examiner  
Richard C Weisberger

Applicant(s)/Patent Under  
Reexamination  
KEMP ET AL.  
Art Unit  
3624  
Page 1 of 1

U.S. PATENT DOCUMENTS

Table with 5 columns: \*, Document Number (Country Code-Number-Kind Code), Date (MM-YYYY), Name, Classification. Rows A through M, all with US- as country code.



FOREIGN PATENT DOCUMENTS

Table with 5 columns: \*, Document Number (Country Code-Number-Kind Code), Date (MM-YYYY), Country, Name, Classification. Rows N through T.

NON-PATENT DOCUMENTS

Table with 2 columns: \*, Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages. Rows U, V, W, X.

\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).) Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.



Atty. Dkt. No. 024051-0135

copy # 33 EJ

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Gary Allan KEMP II et al.  
Title: CLICK BASED TRADING WITH INTUITIVE GRID DISPLAY OF MARKET DEPTH  
Patent No.: 6,772,132 B1  
Issue Date: 8/3/2004  
Examiner: R. Weisberger  
Art Unit: 3624

Certificate  
OCT 06 2004  
of Correction

REQUEST FOR CERTIFICATE OF CORRECTION FOR PTO MISTAKE PURSUANT TO 37 C.F.R. § 1.322(a)

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Enclosed, in duplicate, is a Certificate of Correction, Form PTO/SB/44, for United States Patent Number 6,772,132 issued August 3, 2004. The following Patent Office printing errors appear in the issued patent:

ON THE TITLE PAGE

OTHER PUBLICATIONS - After the last entry, please insert --Patsystems News Release, PATSYSTEMS LAUNCHES J TRADER, November 06, 2001--.

This publication was listed on the Form PTO-892 which was forwarded from the PTO as part of the Notice of Allowability (paper no. 28) mailed February 10, 2004. A copy of the Form PTO-892 is attached for your review.

OCT 08 2004

**IN THE SPECIFICATION**

Column 9, line 65, delete "sell" and insert --buy--;

Column 10, line 2, delete "buy" and insert --sell--.

These changes were made in the amendment filed on March 21, 2003, a copy of which has been attached for your review.

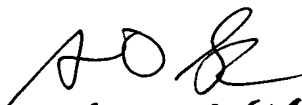
Applicant submits that the above changes would not constitute new matter, and correction thereof would not require reexamination.

Pursuant to 37 C.F.R. §1.322, Applicant requests that the enclosed Certificate of Correction be approved.

Although Applicant believes that no fee is required for this Request, the Commissioner is hereby authorized to charge any additional fees which may be required for this Request to Deposit Account No. 19-0741.

Respectfully submitted,

Date OCTOBER 4, 2004

By   
Reg No 41514

FOLEY & LARDNER LLP  
Customer Number: 22428  
Telephone: (202) 672-5485  
Facsimile: (202) 672-5399

William T. Ellis  
Attorney for Applicant  
Registration No. 26,874

OCT 08 2004

Under the Paperwork Reduction Act of 1995, no persons are required to a collection of information unless it displays a valid OMB control number.  
(Also Form PTO-1050)

**UNITED STATES PATENT AND TRADEMARK OFFICE  
CERTIFICATE OF CORRECTION**

PATENT NO : 6,772,132 *B1*  
DATED : 8/3/2004  
INVENTOR(S) : Gary Allan Kemp II; Jens-Uwe Schluetter; Harris Brumfield

It is certified that errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

**ON THE COVER PAGE**

OTHER PUBLICATIONS - After the last entry, insert --Patsystems News Release, PATSYSTEMS LAUNCHES J TRADER, November 06, 2001--.

**~~IN THE SPECIFICATION~~**

Column 9, line 65, delete "sell" and insert --buy--.

Column 10, line 2, delete "buy" and insert --sell--.

MAILING ADDRESS OF SENDER:

Customer Number: 22428

PATENT NO. 6,772,132 *B1*

William T. Ellis  
Foley & Lardner LLP  
3000 K Street NW  
Suite 500

No. of additional copies

⇒ 1

Washington, DC 20007-5143

Burden Hour Statement: This form is estimated to take 1.0 hour to complete. Time will vary depending upon the needs of the individual case. Any comment on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORM TO THIS ADDRESS. SEND TO: Commissioner for Patents, PO Box 1450, Alexandria, VA 22313-1450.

OCT 08 2004

Under the Paperwork Reduction Act of 1995, no persons are required to a collection of information unless it displays a valid OMB control number.  
(Also Form PTO-1050)

**UNITED STATES PATENT AND TRADEMARK OFFICE  
CERTIFICATE OF CORRECTION**

PATENT NO : 6,772,132 B1  
DATED : 8/3/2004  
INVENTOR(S) : Gary Allan Kemp II; Jens-Uwe Schluetter; Harris Brumfield

It is certified that errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

**ON THE COVER PAGE**

OTHER PUBLICATIONS - After the last entry, insert --Patsystems News Release, PATSYSTEMS LAUNCHES J TRADER, November 06, 2001--.

**IN THE SPECIFICATION**

Column 9, line 65, delete "sell" and insert --buy--.

Column 10, line 2, delete "buy" and insert --sell--.

MAILING ADDRESS OF SENDER: Customer Number: 22428  
William T. Ellis  
Foley & Lardner LLP  
3000 K Street NW  
Suite 500

PATENT NO. 6,772,132 B1  
No. of additional copies

⇒ 1

Washington, DC 20007-5143

Burden Hour Statement: This form is estimated to take 1.0 hour to complete. Time will vary depending upon the needs of the individual case. Any comment on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORM TO THIS ADDRESS. SEND TO: Commissioner for Patents, PO Box 1450, Alexandria, VA 22313-1450.

OCT 08 2004



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,

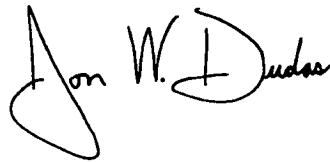
Line 65, delete "sell" and insert -- buy --.

Column 10,

Line 2, delete "buy" and insert -- sell --.

Signed and Sealed this

Second Day of August, 2005



JON W. DUDAS  
*Director of the United States Patent and Trademark Office*



Atty. Dkt. No. 024051-0135

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Gary Alan KEMP II et al.

Title: CLICK BASED TRADING WITH INTUITIVE GRID DISPLAY OF MARKET DEPTH

Appl. No.: 09/590,692

Filing Date: 06/09/2000

Examiner: R. Weisberger

Art Unit: 3624

<b>CERTIFICATE OF FACSIMILE TRANSMISSION</b>	
I hereby certify that this paper is being facsimile transmitted to the United States Patent and Trademark Office, Washington, D.C. on the date below.	
Cymanthia Irving	
(Printed Name)	
(Signature)	
March 21, 2003	
(Date of Deposit)	

**AMENDMENT TRANSMITTAL**

Commissioner for Patents  
Washington, D.C. 20231

Sir:

Transmitted herewith is an amendment in the above-identified application.

- Small Entity status under 37 C.F.R. § 1.9 and § 1.27 has been established by a Small Entity statement previously submitted.
- Small Entity statement is enclosed.
- The fee required for additional claims is calculated below:

	Claims as Amended	Previously Paid For	Extra Claims Present	Rate	Additional Claims Fee
Total Claims:	73	67	6	\$18.00	\$108.00
Independents:	6	6	0	\$84.00	\$0.00
First presentation of any Multiple Dependent Claims:				\$280.00	\$0.00
<b>CLAIMS FEE TOTAL:</b>					<b>\$108.00</b>

- Applicant hereby petitions for an extension of time under 37 C.F.R. §1.136(a) for the total number of months checked below:

<input type="checkbox"/>	Extension for response filed within the first month:	\$110.00	\$0.00
<input type="checkbox"/>	Extension for response filed within the second month:	\$410.00	\$0.00
<input type="checkbox"/>	Extension for response filed within the third month:	\$930.00	\$0.00
<input type="checkbox"/>	Extension for response filed within the fourth month:	\$1,450.00	\$0.00
<input type="checkbox"/>	Extension for response filed within the fifth month:	\$1,970.00	\$0.00
	EXTENSION FEE TOTAL:		\$0.00
	CLAIMS AND EXTENSION FEE TOTAL:		\$108.00
<input checked="" type="checkbox"/>	Small Entity Fees Apply (subtract ½ of above):		\$54.00
	TOTAL FEE:		\$54.00

Please charge Deposit Account No. 19-0741 in the amount of \$54.00. A duplicate copy of this transmittal is enclosed.

A check in the amount of \$54.00 is enclosed.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Please direct all correspondence to the undersigned attorney or agent at the address indicated below.

Respectfully submitted,



Date March 21, 2003

By \_\_\_\_\_

FOLEY & LARDNER  
Customer Number: 22428



22428

PATENT TRADEMARK OFFICE

Telephone: (202) 672-5300

Facsimile: (202) 672-5399

Ankur D. Shah  
Attorney for Applicant  
Registration No. 41,514

**FILE ORDERING**  
order patent files results



Monday  
2/28/2005  
11:50:56 AM  
WFO1003PR

Serial# 09/590692 File order accepted  
Patent# 6772132

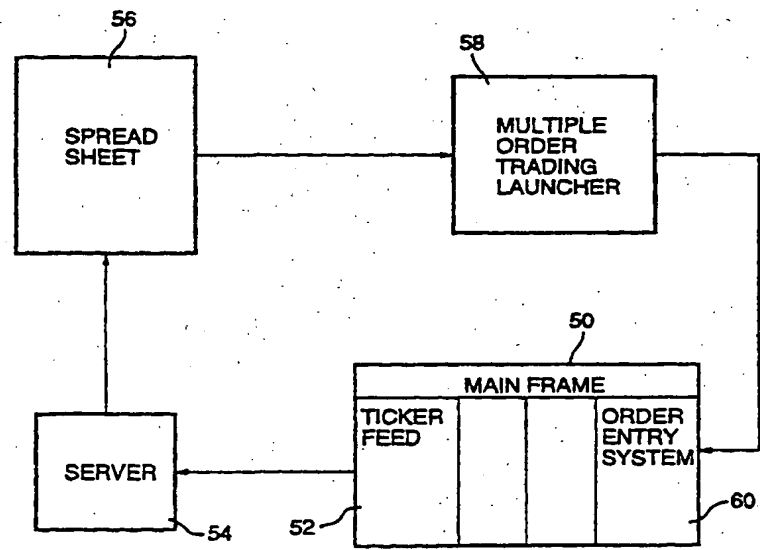
Place another order



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

<p>(51) International Patent Classification <sup>6</sup> : <b>G06F 17/60</b></p>	<p><b>A1</b></p>	<p>(11) International Publication Number: <b>WO 95/26005</b> (43) International Publication Date: 28 September 1995 (28.09.95)</p>
<p>(21) International Application Number: <b>PCT/CA95/00123</b> (22) International Filing Date: 3 March 1995 (03.03.95) (30) Priority Data: 2,119,921 23 March 1994 (23.03.94) <b>CA</b> (71)(72) Applicant and Inventor: <b>BELZBERG, Sydney, H.</b> [CA/CA]; Suite 5707, 40 King Street West, Toronto, Ontario M5H 3Y2 (CA). (74) Agent: <b>SHEARN, G., James, M.</b>; Suite 4300, Scotia Plaza, 40 King Street West, Toronto, Ontario M5H 3Y4 (CA).</p>		<p>(81) Designated States: AM, AT, AU, BB, BG, BR, BY, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TT, UA, UG, US, UZ, VN, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG), ARIPO patent (KE, MW, SD, SZ, UG).</p> <p><b>Published</b> <i>With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i></p>

(54) Title: **COMPUTERIZED STOCK EXCHANGE TRADING SYSTEM**



(57) Abstract

An improvement in computer automated stock exchange trading whereby a graphic user interface with a mouse and display is used to select parameters such as share symbol, price selection, order size, and transaction type, as well as other indicators to launch a trading order to the order entry system of a stock exchange computer. Further improvements include a programmed interface by which data on a group of shares may be read from a spreadsheet formulated into an order and launched automatically or in response to a signal from an operator so as to trade an index or basket of shares substantially instantaneously.

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**COMPUTERIZED STOCK EXCHANGE TRADING SYSTEM**

This invention relates to automated means for effecting the purchase and sale of shares traded on a stock exchange. More particularly, it relates to computer software and hardware by which an operator may instantaneously effect the transfer of shares of a large number of corporations.

**BACKGROUND:**

For many years the trading of shares listed on a stock exchange were effected by the activities of people known as traders on the trading floor of a stock exchange, and were confirmed by some form of notation or writing on paper. Once effected, the trades or transfers of shares were formally reported to brokers for the purchasing and selling customers in a formal way with or without the delivery of the share certificates.

More recently the transactions have become automated so that trades may be done by a trader operating a keyboard to enter the necessary commands into a terminal connected to the mainframe computer of the stock exchange, or a small personal computer with a terminal emulator. With this automated system a trader may enter an order to buy or sell which is transmitted to the central system of the stock exchange where it matched with another trader who is willing to sell or buy the same shares, and the computer then confirms the completion of the transaction to each trader, and the transaction is confirmed and recorded by means of a hard copy generated on a printer.

Although this computerized automated system was much faster than the trading floor, it still required a trader to key in by hand the necessary data and commands for each

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individual stock being traded. From the information available  
at a terminal, the trader/operator would have to input the  
symbol for the company shares, the price, the exchange, the  
size of the order, and the instructions to buy, sell, cross  
5 or short trade the stock.

It has even become possible to effect trades in  
certain stocks automatically when they reach a certain price  
level.

However, modern investment strategies involve  
10 the investment in large groups or "basket" of listed shares  
as part of an entire portfolio which is strategically selected  
to provide a balance of growth potential, income generation,  
and risk avoidance. These portfolios are often held by mutual  
funds, banks, insurance companies, or other institutional  
15 investors, and they are frequently being changed to adjust  
the balance in the factors which effect growth, income and  
risks.

Some institutions invest in an established mixture of stocks which reflect the current economic climate in the country, such as the TSE 35, the TSE 100, the TSE 300, and in the United States the Dow Jones or other representative portfolios. In some cases institutional investors will establish their own collection of shares which it considers to represent their investment strategy and objectives. These may be weighted in favour of industry groups such as mining companies, financial institutions, manufacturing, or others considered preferable by the investment manager.

As a result of this strategy of investing in a mixed "basket" of shares, institutional investors are often increasing or decreasing their investment in the entire range of shares in a basket or index. This therefore requires a large number of trades in order to effect the single

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investment move. Hitherto, this has been done by a  
trader/operator keying in the necessary trades in each  
individual stock through a computer terminal. Where the  
portfolio includes a list of 100 stocks, for example, this  
5 is a lengthy process and in fact the problem arises that  
the prices of many shares would change during the time it  
takes to key in the various orders, and the original  
conditions necessary to satisfy the requirements of the  
particular trade may no longer be present.

10 SUMMARY OF THE INVENTION:

It is therefore the purpose of the present  
invention to provide an automated, computerized trading system  
in which multiple share order entries can be executed  
automatically within seconds by the trader/operator in  
15 activating a few entries on a keyboard. This method of

trading is accomplished by means of the present invention in which a list of stocks is continually monitored and their prices recorded on a "spreadsheet format" on a personal computer and displayed on a screen. When the composite price of the list of stocks conforms to certain predetermined parameters, the trader can execute the necessary instructions to transform the list into an order on the personal computer (which is connected to the computerized order entry system of the stock exchange, which may be a mainframe), and the order will be immediately processed by the computer and sent to the exchange's order entry system. Thus, the purchase or sale of a basket comprising various numbers (volumes) of a variety of shares can be executed in a matter of seconds before the price or other conditions have changed.

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By means of the system programmed in accordance  
with the present invention, a conventional terminal or  
personal computer capable of communication with a stock  
exchange central computer can be adapted to read, process,  
5 and react to information from the stock exchange, and/or  
commands of the operator and automatically and quickly perform  
multiple trades in a manner described above.

**DESCRIPTION OF THE PREFERRED EMBODIMENT:**

The invention may be better understood by a  
10 description of one embodiment with reference to the attached  
drawings in which:

Figure 1 is a schematic illustration of a mainframe  
stock exchange computer to which a series  
or terminals or personal computers are  
15 connected each comprising a display screen  
and keyboard;

Figure 2 is a graphic user interface suitable  
for use in executing single stock trans-  
actions;

5 Figure 3 is a graphic user interface used in  
effecting multiple trades in a basket  
comprising various volumes of a list of  
shares;

10 Figure 4 is a schematic block diagram which  
illustrates the sequence and flow of  
data and commands by which the system  
is used.

In the system illustrated in the attached drawings  
15 Figure 1 shows a mainframe computer 2 used to process all  
the data relating to the stocks listed on a stock exchange,  
such as the TSE, the VSE, or the NYSE, as the case may be.

Since the advent of computerized trading, these mainframe  
central computers are connected to a variety of terminals,  
such as 4, in various trading offices of brokerage houses  
through the city and abroad. By means of the individual  
5 terminals, traders may review data on the display screen  
8 and input the necessary information and instructions on  
the keyboard 6 whereby a given volume of a particular stock  
is bought or sold (or crossed or shorted) in a manner which  
is the automated equivalent of an individual transaction  
10 on the trading floor.

Such a network is referred to, in the case of  
the Toronto Stock Exchange, as "CATS" which is an  
abbreviation for "Computer Aided Trading System", and similar  
systems are now commonly used and operated by many stock  
15 exchanges.

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Figure 2 illustrates an improvement which comprises a graphic user interface with a network such as CATS which allows a trader/operator to use the trading system more quickly and efficiently.

5           Whereas previously the data necessary for a transaction (stock symbol, volume, price, buy or sell, etc., etc.) had to be entered on the keyboard and showed up in the screen area 10 before the order could be launched to the central processing unit, the present invention allows  
10 the instructions to be put in much more quickly, more easily and with less error.

In the embodiment illustrated in Figure 2, the trader/operator can enter the symbol representing the stock in the area 12 followed by the price at which the transaction  
15 is to be completed in space 14 (which may be a selected price



or the bid offer or last price derived from the CATS data). Then the size of the order (or volume of the transaction) may be indicated in space 16 by selecting the appropriate nominal figures 1,000, 5,000, 10,000, 50,000 or by inserting the precise volume in the box 18. Many of the instruction choices provided by this interface (such as bid, offer, last, ID, volume, exchange, transaction) may be entered without keying by using a mouse as illustrated at 10 in Figure 1, which directs a cursor or indicator to the command.

In the illustrated embodiment the other information may be selected, such as the appropriate exchange in area 20, the type of transaction in area 22, the buy and sell IDs in areas 24 and 26. Other areas 28 provided by the interface include features to provide various information from the data bank as an aid to the operator.

To effect individual transactions an operator may, by mouse or a combination of mouse and keyboard, enter the necessary data and commands and quickly transmit the transaction to a stock exchange.

5 Thus, by means of the interface illustrated in Figure 2, transactions of a single stock through a computer aided trading system may be more quickly and efficiently executed.

10 The second aspect of the present invention is illustrated in Figure 3 which is a reproduction of a display screen which is part of the multiple stock trading system.

By means of the software of this invention, the terminal or personal computer illustrated in Figure 1 can  
15 be used to connect the spreadsheet of the system to the data base of the stock exchange mainframe and display the

information (including symbol, volume of shares, bid, first  
and last price) in the area 30 of the display screen of the  
terminal as shown in Figure 3. For purposes of trading  
an index or custom basket of shares, the display will contain  
5 the information with respect to the shares included in the  
index or basket as illustrated. The system then executes  
a dynamic data link to the spreadsheet which causes the  
spreadsheet to read the list of stocks to the multiple order  
trading system of the present invention. In the next step  
10 the system captures the spreadsheet data and makes each stock  
price and volume a variable that is inserted in a list of  
preprogrammed commands. The list is then sent to the order  
entry system of the stock exchange with a single key stroke.

Thus, each of the stocks and the pertinent data  
15 relating thereto is entered into the multiple order entry

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system, and at the appropriate time and with the appropriate command, the entire basket can be dealt with in a single transaction within a matter of seconds before prices or other criterion change.

5           The present system therefore eliminates the need for a trader/operator to enter each individual stock and the transaction criterion, which in the case of 100 stocks or so, would be time-consuming, prone to error, and difficult to coordinate because of the changing prices and their  
10 relationship to the transaction criterion.

Also illustrated in Figure 3 is a box 32 in which the necessary commands may be entered from a keyboard.

Also illustrated, in area 34, is a series of commands which may be quickly entered by means of a mouse  
15 or similar device, including identification of the basket

of shares to be traded 36, the type of transaction (buy,  
sell, cross, or sell short) 38, the appropriate buy ID 40  
or sell ID 42, and the price (bid, offer, or last) 44. When  
the appropriate commands have been entered the transaction  
5 may be executed by pressing the launch button 46 and all  
of the shares of the basket are traded almost instantaneously.

As in all cases a provision is made for the entry  
of a pass word 48 to provide security against unauthorized  
use and other functions which are commonly associated with  
10 graphic user interface are provided.

Therefore, by means of the present system, a  
terminal or personal computer may be used to capture from  
a spreadsheet all the data necessary to trade in a selected  
list or group of shares, and by inserting this data into  
15 the preprogrammed commands of the system, all of the necessary  
commands to execute the trade in all of the shares may be  
sent to the stock exchange order entry system in a single  
set of signals.

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It will be appreciated that this system will enable a trader to deal in baskets of shares, whether they are related to a standard index, such as the TSE 35 or the TSE 100, or a customized basket of shares designed for or by each customer and will be able to effect transactions quickly and without the complications that arise from the time delay in entering each stock transaction separately.

Figure 4 is a block diagram and flow chart which illustrates schematically how the present invention facilitates a faster more efficient operation of the automated trading facilities. In the diagram the mainframe or central computer of the stock exchange is shown at 50 and includes a ticker feed system 52 which constantly generates updated data on the prices and volumes of various stocks being traded, and delivers the updated data to a server 54 where the data

is stored and accessible to any terminals which are connected to the network. The information in the server is read by the spreadsheet 56 of a terminal, such as the one illustrated in Figure 1, which is designed to read and display a given basket of shares with the pertinent data with respect to volumes, bid, offer, last, etc. Block 58 represents the multiple order trading system of the present invention which reads the data from the spreadsheet, including all the data on a given basket of shares, organizes the data into the proper format for automated trading, and issues the multiple orders to the order entry system 60 of the central computer 50 at the stock exchange.

By having the data formatted by the multiple order launcher, the transaction of a whole basket of shares can be effected quickly, easily, with fewer errors and within the time frame for which the criterion or instructions for the transaction are valid.

By providing a means, such as the multiple order launcher, which is capable of capturing all the data on a spreadsheet, selecting what is required, and organizing it into the form of an order, the present invention creates  
5 a bridge between the spreadsheet, which contains the necessary data on a group of stocks, and the order entry system of the stock exchange which effects a transaction in those stocks.

Furthermore, because it can use and format the  
10 data more quickly and correctly than an operator on a keyboard, it is capable of effecting a transaction within the time and parameters which are rapidly changing, in a manner which an operator could not accomplished. Therefore, instead of merely processing data, it is capable of activating  
15 and controlling stock transactions. In this respect the



system may be adapted to initiate a transaction automatically when certain criterion are met, or may be designed to create a signal when the criterion are met so that a trader/operator may make the final decision or judgment to execute the transaction or not, and may then execute it substantially  
5 instantaneously once the decision has been made.

Once the order entry has been received by the exchange system, the transaction is completed and the appropriate records and confirmation documents are produced  
10 in the usual manner without any further activity by the trader.

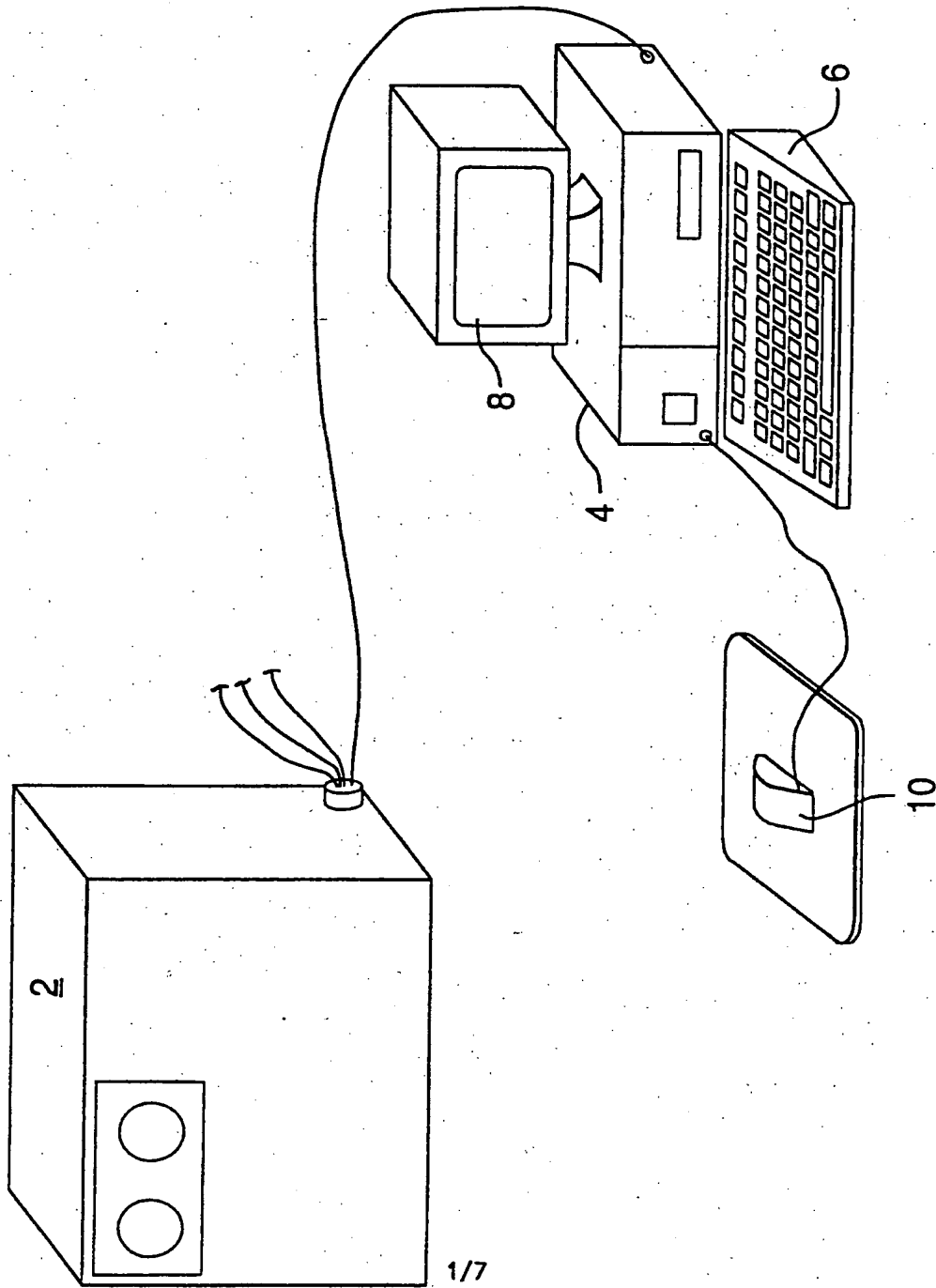
It will, of course, be realized that numerous modifications and variations from the illustrated embodiments may be employed without departing from the inventive concept  
15 herein.

CLAIMS:

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. For use in a computer system having means to receive data from a central computer of a stock exchange on a spreadsheet;
  - display means and means to communicate orders to the order entry system of the stock exchange computer;
  - a control system comprising means to read selected groups of said data from said spreadsheet;
  - means to formulate said data in a manner acceptable to the stock exchange computer or entry system;
  - means to launch said orders to the stock exchange computer order entry system.

2. A control system as claimed in claim 1 wherein said means to launch is responsive to conditions in the data read from said spreadsheet.
3. Apparatus as claimed in claim 2 wherein said means to launch said order is responsive to the commands of an operator.
4. Apparatus as claimed in claims 1, 2 and 3 wherein said means to read, means to formulate, and means to launch are operated by means of a graphic user interface with display means and a mouse adapted to communicate to selected controls on the graphic user interface display.
5. A system as claimed in claim 4 in which said graphic user interface displays commands which include share symbols, price selections, order size, and transaction type.



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FIG.1.

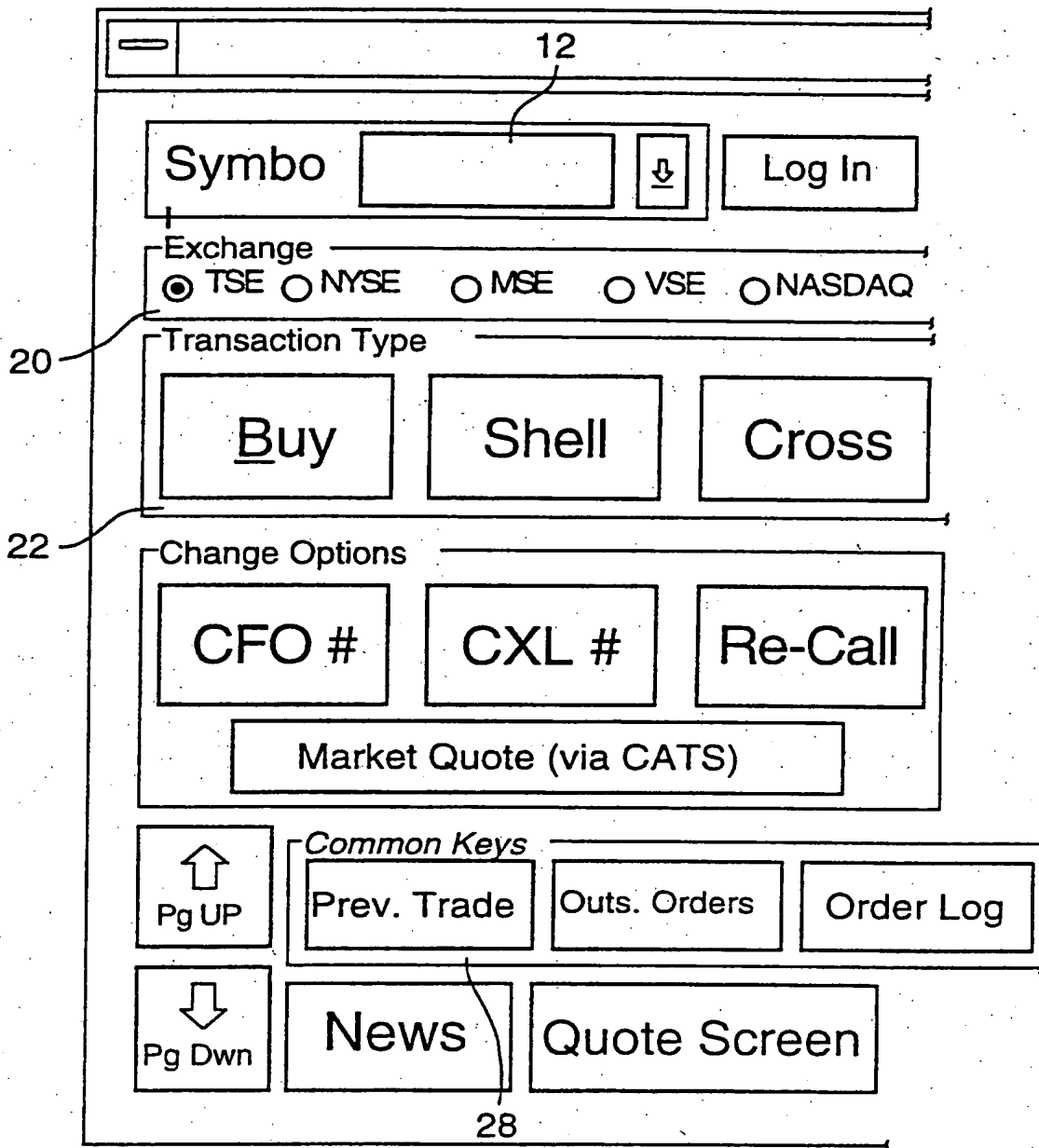


FIG. 2 A.  
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03/14/94 Belzberg CATS Interface 2:44 PM

Log Out

14 Price   Bid  Offer  Last

AMEX  ASE

Order Size 16

1,000  
 5,000  
 10,000  
 20,000  
 50,000

Order Size  18

Buy ID →  
OCL 24  
ON/CL  
ON/CL X  
ON/CL  
PPTX

Self ID →  
OCL 26  
ON/CL  
ON/CL X  
ON/CL  
PPTX

Short

Stk Watch    Stk. Ord.    Order Rep.

Super Charts    Trading Logs    Basket Trades

FIG.2B.

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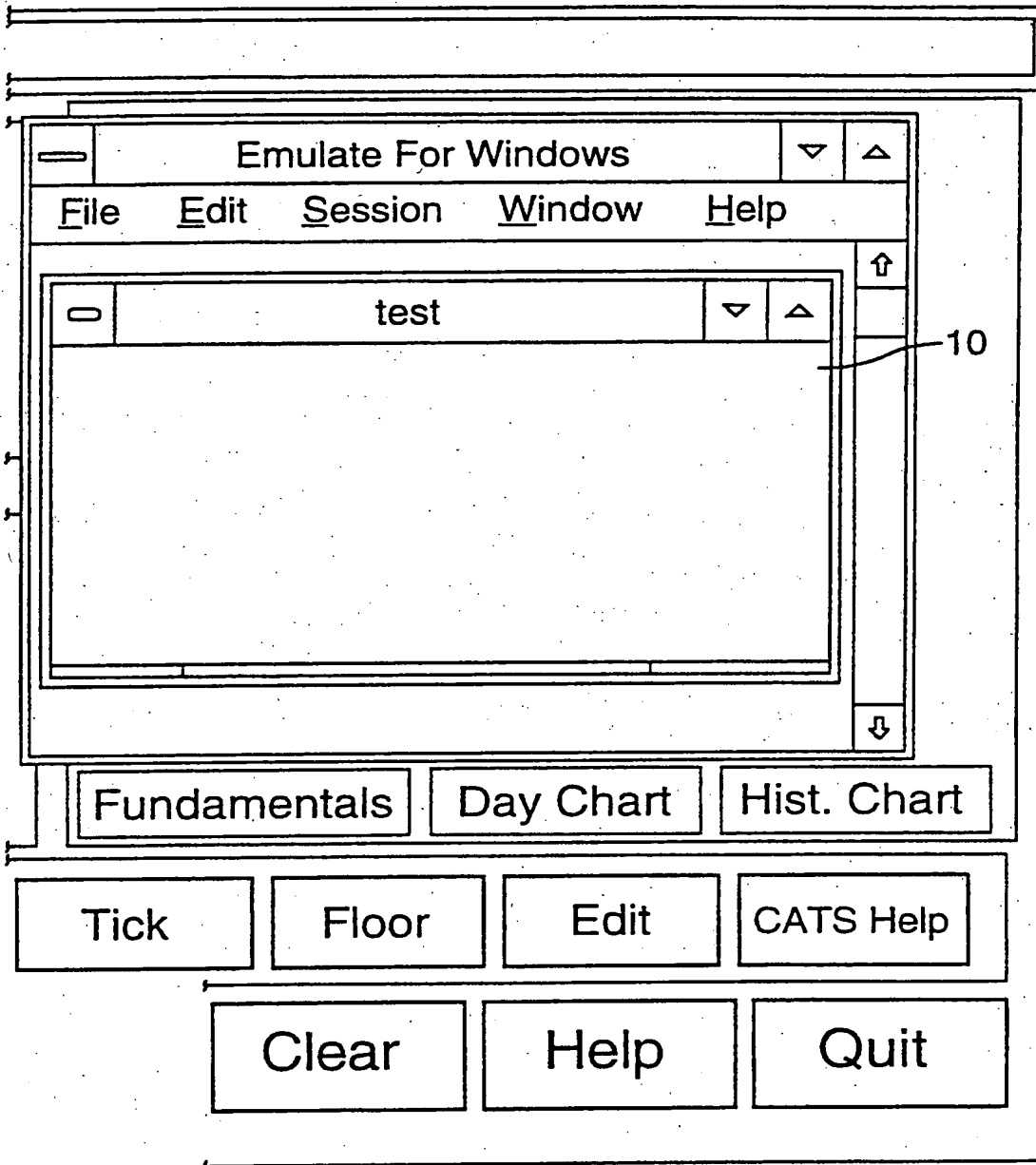


FIG.2C.

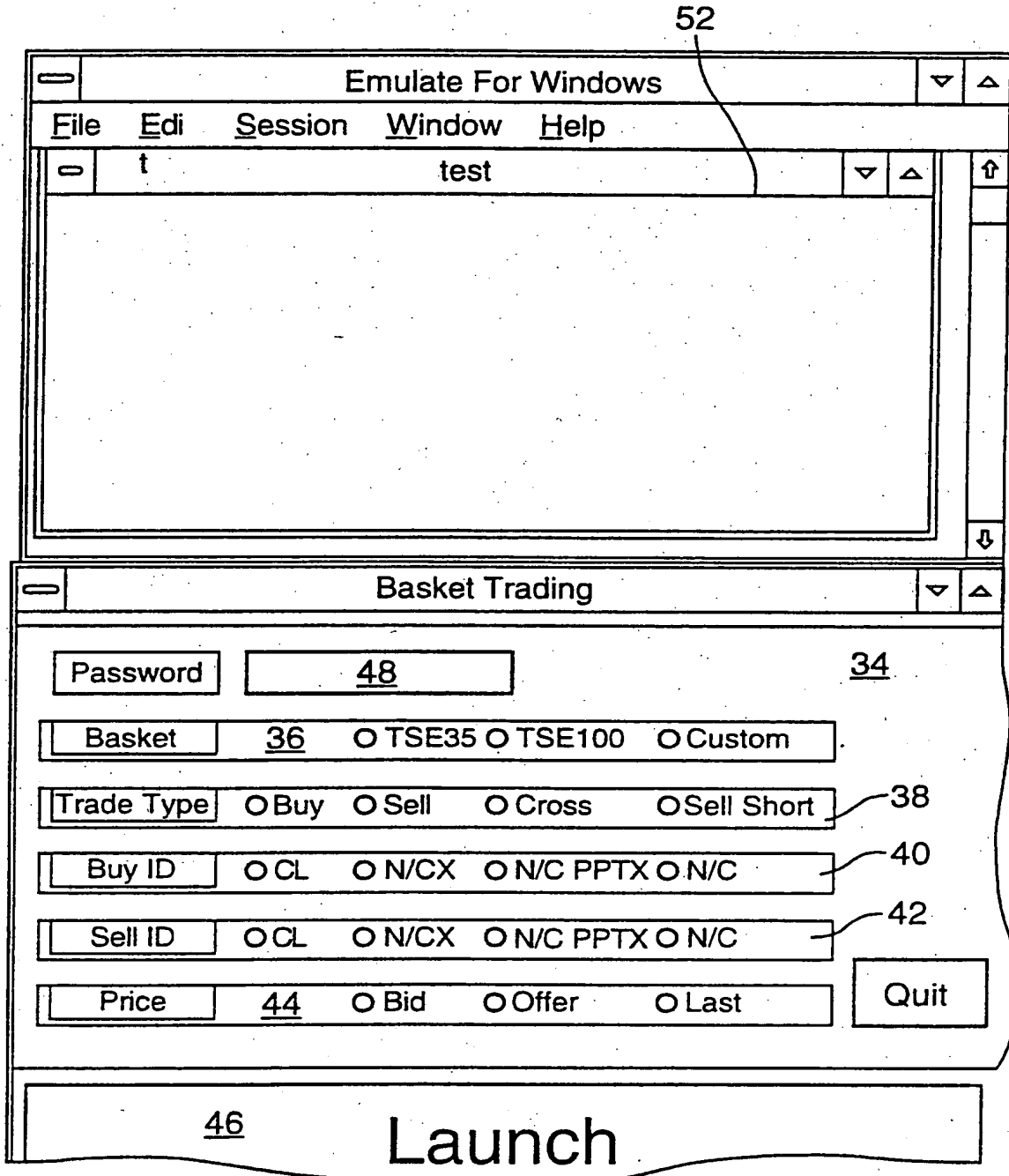


FIG.3 A.

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B9	A	B	C	D	E	F	G	H	I	
			INDEX	220.293597	221.643484		221.01182	223.592281		DOWN
14				Bid	Ask	Ask Size	LAST	Yesterday		
15										
16	SVM	SHS	Bid Size	Bid	Ask	Ask Size	LAST	Yesterday		
17	AL	1500	115	31	31.125	151	31.125	32		
18	AGT	1000	393	17.125	17.25	475	17.125	17.25		
19	BBD	1000	128	20	20.125	198	20.125	20.25		
20	B	2000	300	48.625	48.75	646	48.625	48.875		
21	BNS	1000	20	30.75	30.875	464	30.75	31.375		
22	BWO	1400	146	29.125	29.25	282	29.25	29.5		
23	OM	1500	95	34.375	34.625	110	34.375	34.75		
24	CXY	700	17	27.75	27.875	64	27.875	28		
25	OP	2000	41	22.875	23	174	22.875	23.5		
26	CTRA	2000	44	12.375	12.5	171	12.375	12.875		
27	EOO	1000	18	17	17.25	115	17	17.375		
28	IMO	500	17	46.375	46.625	93	46.5	47		
29	IMS	1000	71	39.625	39.75	46	39.625	40.125		
30	LAC	1500	100	11.375	11.5	902	11.375	11.5		
31	LDM	1500	888	8.5	8.625	5	8.625	8.875		
32	MB	1000	141	23	23.125	9	23	23.375		
33	MCL	1000	45	25.625	25.75	22	25.625	25.25		
34	M-IP	1000	908	16.125	16.25	883	16.125	16.25		

FIG. 3B.

30

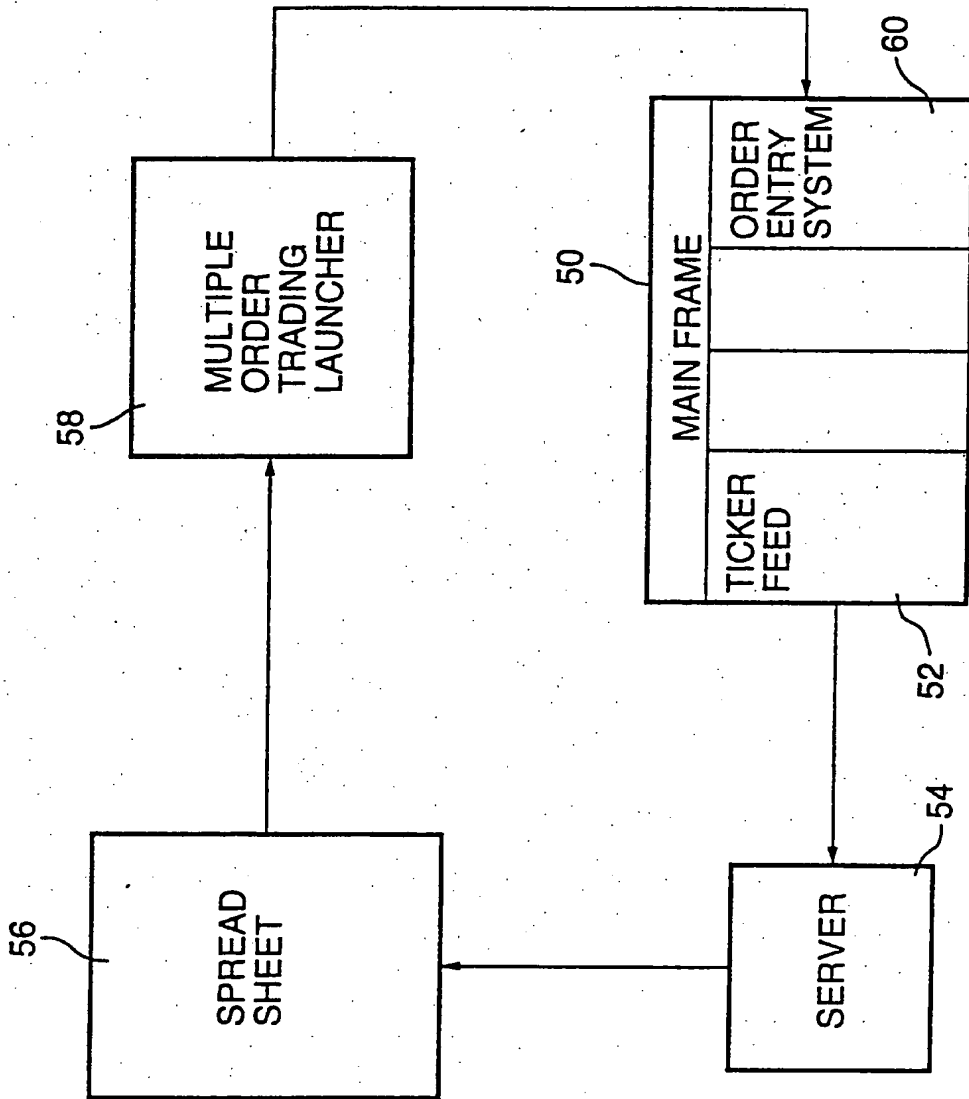


FIG.4.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/CA 95/00123

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 6 G06F17/60

According to International Patent Classification (IPC) classed to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 6 G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP,A,0 401 203 (MJT HOLDINGS INC) 5 December 1990 see the whole document	1-5
X	EP,A,0 453 150 (COMMODITY EXCHANGE INC) 23 October 1991 see the whole document	1-5
X	WO,A,91 14231 (CHICAGO TRADE BOARD) 19 September 1991 see the whole document	1-5

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

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- \*P\* document published prior to the international filing date but later than the priority date claimed

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- \*&\* document member of the same patent family

Date of the actual completion of the international search

21 July 1995

Date of mailing of the international search report

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Authorized officer

Suendermann, R

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP-A-0401203	05-12-90	US-A- 5101353	31-03-92
		CA-A- 2016715	30-11-90
		JP-A- 306806	27-03-91
EP-A-0453150	23-10-91	AU-B- 643982	02-12-93
		AU-A- 7358491	24-10-91
		JP-A- 4227566	17-08-92
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		AU-B- 653147	22-09-94
		AU-A- 7493291	10-10-91
		EP-A- 0471063	19-02-92
		JP-T- 4507159	10-12-92



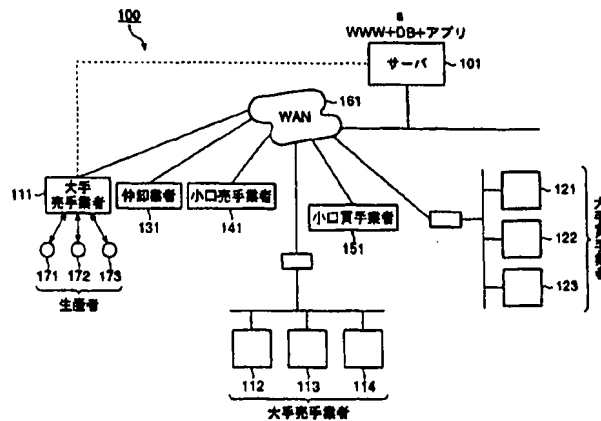
<p>(51) 国際特許分類6 G06F 17/60</p>	<p>A1</p>	<p>(11) 国際公開番号 WO99/30259</p> <p>(43) 国際公開日 1999年6月17日(17.06.99)</p>																	
<p>(21) 国際出願番号 PCT/JP98/05522</p> <p>(22) 国際出願日 1998年12月7日(07.12.98)</p> <p>(30) 優先権データ</p> <table border="0"> <tr><td>特願平9/337541</td><td>1997年12月8日(08.12.97)</td></tr> <tr><td>特願平9/337542</td><td>1997年12月8日(08.12.97)</td></tr> <tr><td>特願平9/337543</td><td>1997年12月8日(08.12.97)</td></tr> <tr><td>特願平9/337544</td><td>1997年12月8日(08.12.97)</td></tr> <tr><td>特願平9/337545</td><td>1997年12月8日(08.12.97)</td></tr> <tr><td>特願平10/196529</td><td>1998年6月26日(26.06.98)</td></tr> <tr><td>特願平10/196530</td><td>1998年6月26日(26.06.98)</td></tr> <tr><td>特願平10/323118</td><td>1998年11月13日(13.11.98)</td></tr> <tr><td>特願平10/337416</td><td>1998年11月27日(27.11.98)</td></tr> </table> <p>(71) 出願人 (米国を除くすべての指定国について) 新日本製鐵株式会社 (NIPPON STEEL CORPORATION)[JP/JP] 〒100-8071 東京都千代田区大手町2丁目6番3号 Tokyo, (JP)</p>	特願平9/337541	1997年12月8日(08.12.97)	特願平9/337542	1997年12月8日(08.12.97)	特願平9/337543	1997年12月8日(08.12.97)	特願平9/337544	1997年12月8日(08.12.97)	特願平9/337545	1997年12月8日(08.12.97)	特願平10/196529	1998年6月26日(26.06.98)	特願平10/196530	1998年6月26日(26.06.98)	特願平10/323118	1998年11月13日(13.11.98)	特願平10/337416	1998年11月27日(27.11.98)	<p>(72) 発明者 ; および (75) 発明者 / 出願人 (米国についてのみ) 竹熊俊哉(TAKEKUMA, Toshiya)[JP/JP] 村中正信(MURANAKA, Masanobu)[JP/JP] 中牟田哲也(NAKAMUTA, Tetsuya)[JP/JP] 斎藤優子(SAITO, Yuko)[JP/JP] 〒100-8071 東京都千代田区大手町2丁目6番3号 新日本製鐵株式会社内 Tokyo, (JP) 柴崎大喜一(SHIBAZAKI, Takikazu)[JP/JP] 〒104-0033 東京都中央区新川1丁目29番10号 Tokyo, (JP) (74) 代理人 弁理士 國分孝悦(KOKUBUN, Takayoshi) 〒170-0013 東京都豊島区東池袋1丁目17番8号 池袋TGホームストビル5階 Tokyo, (JP)</p> <p>(81) 指定国 CN, US, 欧州特許 (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).</p> <p>添付公開書類 国際調査報告書</p>
特願平9/337541	1997年12月8日(08.12.97)																		
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(57) Abstract

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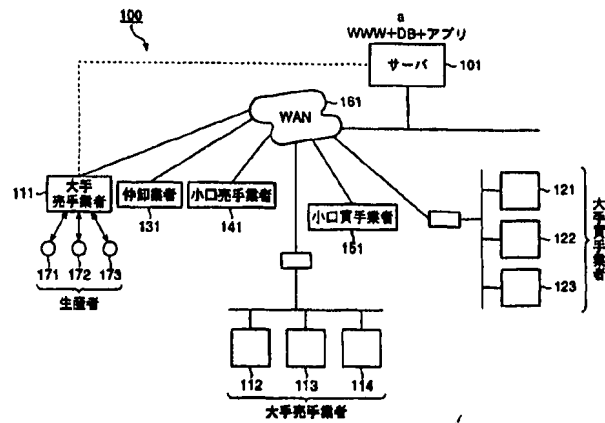
<p>(51) 国際特許分類6 G06F 17/60</p>	<p>A1</p>	<p>(11) 国際公開番号 WO99/30259</p> <p>(43) 国際公開日 1999年6月17日(17.06.99)</p>
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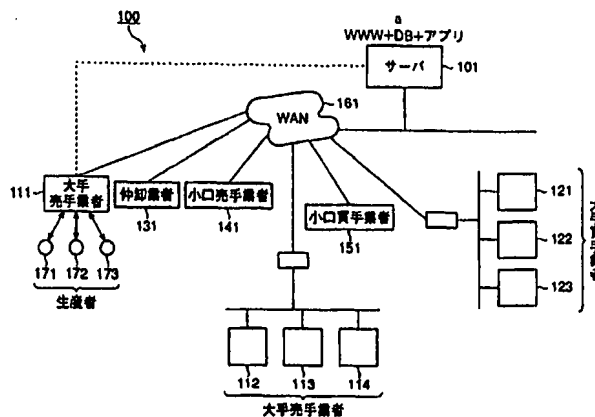
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## (57)要約

買手側及び売手側の各端末装置がホストと相互通信することで、買手側が発する購入情報に基づく予約相対取引の処理と、売手側が発する販売情報に基づく予約相対取引の処理と、複数の上記購入情報と複数の上記販売情報を突き合わせて、双方の条件の折り合うものから順次成約決定する取引の処理とを実行可能とする。このように、所謂先渡取引をネットワーク上で可能にしたことで、買手側及び売手側は共に、卸売市場に出向く必要はなく、商品の販売計画や調達計画を立てることができ、自端末装置にて商品の売買取引を行うことができる。したがって、今迄にない販売及び調達の機会を売手側及び買手側に与えることができるようになり、従来にない効率的な商品取引を行うことができる。

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## 明 細 書

商品取引装置、商品取引システム、商品取引方法、及び記憶媒体

5 技術分野

本発明は、例えば、花卉や青果物等のライフサイクルの短い生鮮商品や、有効期限のあるチケット等のサービス商品、使用日時が限れた航空チケットのように、ある期間が過ぎてしまうと商品価値がなくなる或いは減少する各種商品の売買取引に用いられる商品取引装置、商品取引システム、及び該取引を行うための処

1 0 理ステップをコンピュータが読出可能に格納した記憶媒体に関するものである。

背景技術

例えば、生花の売り買いの取引は、卸売市場で行われる。すなわち、買手業者は、現場に出向き、売手業者が実際に販売している現物を観察し、どのような生

1 5 花がいくらで販売されているかを把握する。そして、希望する生花が販売されていた場合には、その売手と価格等を含めた取引を行う。このようにして、買手業者は、希望する生花を調達する。

また、買手業者が希望する生花を調達するための取引以外にも、例えば、競りにおける商品価格をスライドさせるために、買手業者が競り以前に予め商品（現

2 0 品）を引き取る”先取り”と呼ばれる取引も行われる。或いは、緊急に生花が必要であった場合（葬儀等）の緊急取引に対応するために、売手業者が入荷された商品から予め特定分を取り除いておく”引荷”も行われる。したがって、実際に入荷された生花に対して、買手がついたものや、先取りや引荷等の分を除いた残分（販売残商品）が、競りにかけられることになる。

2 5 しかしながら、従来では、上述したような生花等の商品の売買取引をシステム化したものはなかった。このため、商品の売買取引の流通が複雑化し、次に述べるような（１）～（８）の問題点があった。

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(1) 買手業者は、希望する商品を得るために、決まった時間に現場（卸売市場や卸売会社等）に実際に出向いて行く必要がある。このとき、希望する商品が販売されていればよいが、販売されていない場合には無駄になってしまう。特に、生花等のような商品は、気象や災害等の自然条件の影響を受けやすいものであるため、予定のものが予定通りに販売されない場合が多々ある。したがって、買手業者にとっては、商品を調達する機会が限られており、場当たりの仕入れとなる場合が多く、調達計画を立てることができない。

(2) 売手業者は、卸売市場で商品の販売を行うが、その商品に買手がつくか、どのくらいの量を裁ききれぬかを事前に知ることができず、販売計画を立てることができない。また、裁ききれなかった商品（以下、「販売残商品」又は「現品」とも言う）については、その他の販売手段に頼ることになる。例えば、その販売残商品から引荷分を除いた商品を更に販売し、その販売の結果、残った分を競りにかける、という取引を行う。しかしながら、引荷や競りを考慮して、このような販売残商品の取引を行うことは、非常に販売計画を立てにくい。特に、販売対象が上述したような生花のように、ある期間が過ぎてしまうと品質が低下してしまう商品である場合、入荷、販売、先取りや引荷、競り準備、競り後の分荷によりダメージを受けやすい商品であるため、効率的な販売を行わないと大きなダメージを受ける可能性がある。また、そのダメージが大きい程、価格を下げる必要が出てくる。

(3) 買手業者は、複数種類の商品を大量に希望する場合が多いが、上述した通り、実際に現場（卸売市場）に出向いていかなければ、希望する商品が希望する数量分、どの売手業者により販売されているのか等を事前に知ることができない。このため、計画購入することができない。また、大量に商品を購入しようとすると、その卸売市場の需要が逼迫し、自分で価格をつり上げることになる。

(4) 売手業者は、上述した通り、販売計画を立てることができないため、生産者側も生産計画を立てることができない。

(5) 商品取引の際の価格決定は、電話やファックス等のやり取りで行われる

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ため、価格決定するで非常に長い時間がかかり、効率的ではない。特に、大量の商品の取引では、この問題は顕著である。

(6) 入荷された商品は、販売、先取りや引荷、競り等により裁かれるが、これらの行為は全て商品が実際に存在した上で、或いは、生産者からの出荷が確定した上でしか実際に裁くことができない。したがって、売手業者は、入荷、販売、先取りや出荷、競り等の各過程で裁ける商品を考慮して、販売計画を立てることができない。

(7) 売手業者は、商品が実際に入荷する前（出荷は確定しているが現品が存在していないとき）に、買手業者からの注文に応じて商品の取引を行う場合がある。この場合には、売手業者が買手業者からの電話やファックス等による注文を見ながら、その注文に対して商品の産地の出荷情報を引き当てていく、という作業が行われる。しかしながら、このような取引では、売手業者は単に仲介的な存在であり、商品の取引に生産者が直接関与して進められるものではない。すなわち、このような取引に限らず生産者は、商品の販売に関与することができないため、販売状況に沿った商品の生産計画を立てることができない。

(8) 上記(7)で述べたような、売手業者の商品の引き当て作業によっては、全ての買手業者に公平に注文商品がわたらず、ある特定の買手業者に偏ってしまう場合がある。

また、上述の(1)～(8)の問題点に加えて、次に述べるような”物流費”についての問題点もある。

具体的には、まず、工業製品の売買取引は、定常的に行われ、在庫からの出荷がなされるのが一般的である。このような商品については、商品の売買取引の成立により発生する出荷量や出荷日を、予め把握することができる。したがって、出荷の際の輸送（運搬）等の物流費についても、固定的に把握することができるため、輸送等のサービスを担う物流業者では、運搬先までの距離等に応じた一定の物流費が設定されている。また、工業製品以外の一般商品についても同様に、様々な売買取引の成立により発生する出荷量や出荷日を予め把握することができ

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るため、物流業者では、売買取引により発生する物流費を予測し、実際には都度変動するコストを全体的に把握した上で、それをまかなえる料金としての物流費が一定に設定されている。

- これに対して、花卉（生花）や青果物等の商品、或いは取引がその都度行われるような商品については、上述の工業製品や一般商品とは異なり、定常的に売買取引が行われるものでなく、また、売買取引の成立により発生する出荷量や出荷日が常に変動するものである。例えば、生花等の商品は、上述した通り、気象や災害等の自然条件の影響を受けやすいものであるため、売手業者（生産地を含む）にて実際に出荷できる量を予め把握することは非常に困難である。また、ライフサイクルが短いことから、生産地にて採取した時点で、直ぐに出荷する必要がある。さらに、葬儀等のために緊急に生花が必要である等の理由により、ある買手業者からの注文があった場合にも、その買手業者まで、或いは最寄りの市場まで直ぐに運搬する必要がある。このように、生花や青果物等々の商品については、売買取引がいつ発生するか、それによりどのくらいの出荷量が発生するのか等を予測することが非常に困難であり、また、在庫からの出荷という概念がない。したがって、その物流費を固定にすることはできず、実際に出荷できる量によって物流費が都度変動することになる。

- また、各々の売手業者は、特定の物流業者と契約して、運搬先毎に、出荷量に応じてディスカウントするサービスが行われる場合もある。例えば、売手業者の所在地が愛知県とした場合、愛知県から東京までの物流費については、生花1箱から50箱までの物流費は1箱につき500円、生花50箱から100箱までであれば1箱につき400円、愛知県から北海道までの物流費については、生花1箱から50箱までの物流費は1箱につき700円、生花50箱から100箱までであれば1箱につき500円、というように設定される。このようなディスカウントの物流費についても、上述した出荷量及び出荷日の変動に伴って変動することになる。

したがって、花卉（生花）や青果物等の商品、或いは取引がその都度行われる

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ような商品については、商品の物流費や、各売手業者での物流費のディスカウント率が常に変動するため、買手業者は、物流費を含めた購入総額がいくらになるのか、どの売手業者と取引するのが最適であるか等を予め考慮した取引を行うことができなかった。これは、単純に近い場所の売手業者と多く取り引きされてしま

5 まう等、買手業者と取り引きする売手業者が自然と特定されてしまい、商品の流通が偏ってしまう、という問題につながる。

そこで、本発明は、かかる実情に鑑み、計画的な商品の生産及び販売、及び計画的な商品の調達を可能とすることで、効率的な商品の売買取引を可能とする商品取引装置、商品取引システム、及びそれを実施するための処理ステップをコンピュータが読出可能に格納した記憶媒体を提供することを目的とする。

1 0

また、本発明は、計画的な商品の生産及び販売、及び計画的な商品の調達を可能とすることで、大量の商品の取引であっても、効率的な商品の売買取引を可能とする商品取引装置、商品取引システム、及びそれを実施するための処理ステップをコンピュータが読出可能に格納した記憶媒体を提供することを目的とする。

1 5 また、本発明は、計画的な商品の生産及び販売、及び計画的な商品の調達を、画面上で容易に且つ効率的に可能とすることで、商品の売買取引の効率を飛躍的に向上させることを可能とする商品取引装置、商品取引システム、及びそれを実施するための処理ステップをコンピュータが読出可能に格納した記憶媒体を提供することを目的とする。

2 0 また、本発明は、計画的な商品の生産及び販売、及び計画的な商品の調達を可能とすることで、大量な商品を競り等の現品販売を含む多様な手段で販売する場合であっても、効率的な商品の売買取引を可能とする商品取引装置、商品取引システム、及びそれを実施するための処理ステップをコンピュータが読出可能に格納した記憶媒体を提供することを目的とする。

2 5 また、本発明は、売手側及び買手側のみならず生産者も関与することが可能な商品の取引を効率的に行うことができ、特に、商品の計画的な販売やその管理に有効な商品取引装置、商品取引システム、商品取引方法、及びそれを実施するた