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(54) SYSTEMS AND METHODS FOR PROVIDING A TRADING INTERFACE WITH ADVANCED FEATURES

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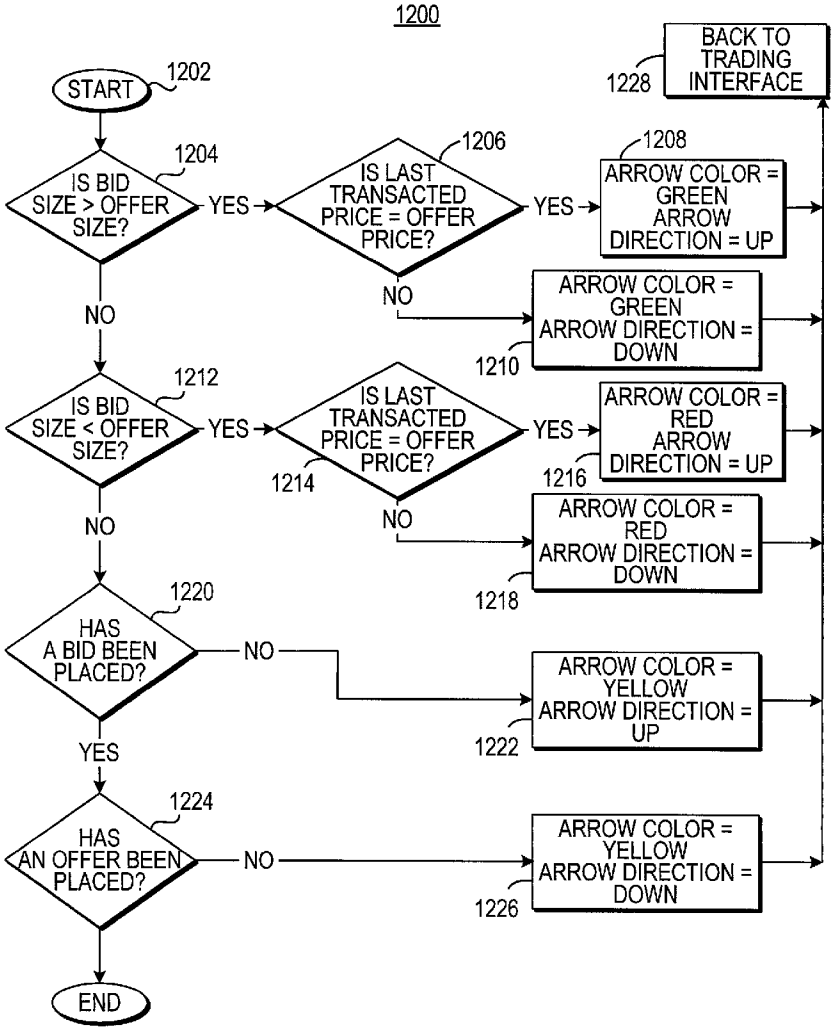
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(57) **ABSTRACT**

Systems and methods for a trading interface with advanced features are provided. Using these systems and methods, a user may create orders, manipulate orders, cancel orders, configure alternative keyboard settings, and/or obtain additional information on transactions. When a user clicks on a bid and/or offer, a dialog box may pop-up, thereby providing the user with multiple options. To enable customization of the keyboard settings to a user's preference, a keyboard settings feature is provided. Users may also be provided with additional information relating to the user's wish to transact.



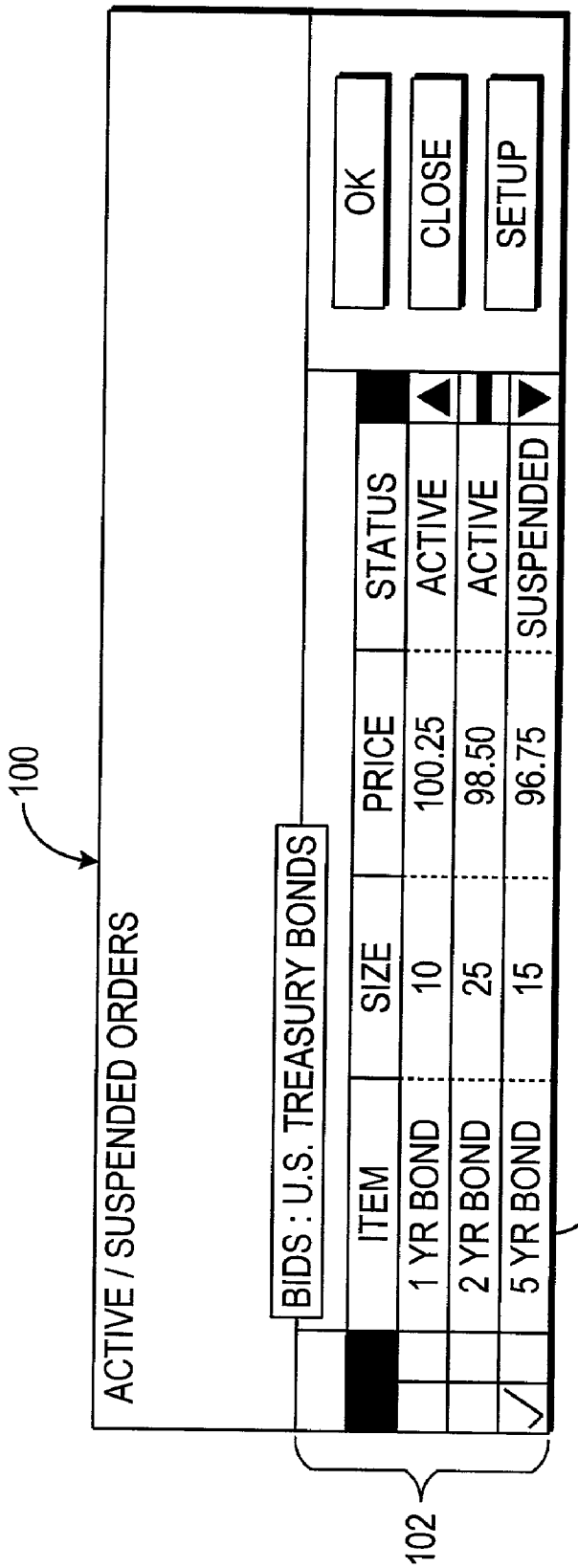

100
ACTIVE / SUSPENDED ORDERS
BIDS : U.S. TREASURY BONDS
OK
CLOSE
SETUP
ITEM
SIZE
PRICE
STATUS
1 YR BOND
10
100.25
ACTIVE
2 YR BOND
25
98.50
ACTIVE
5 YR BOND
15
96.75
SUSPENDED
102
104

FIG. 1

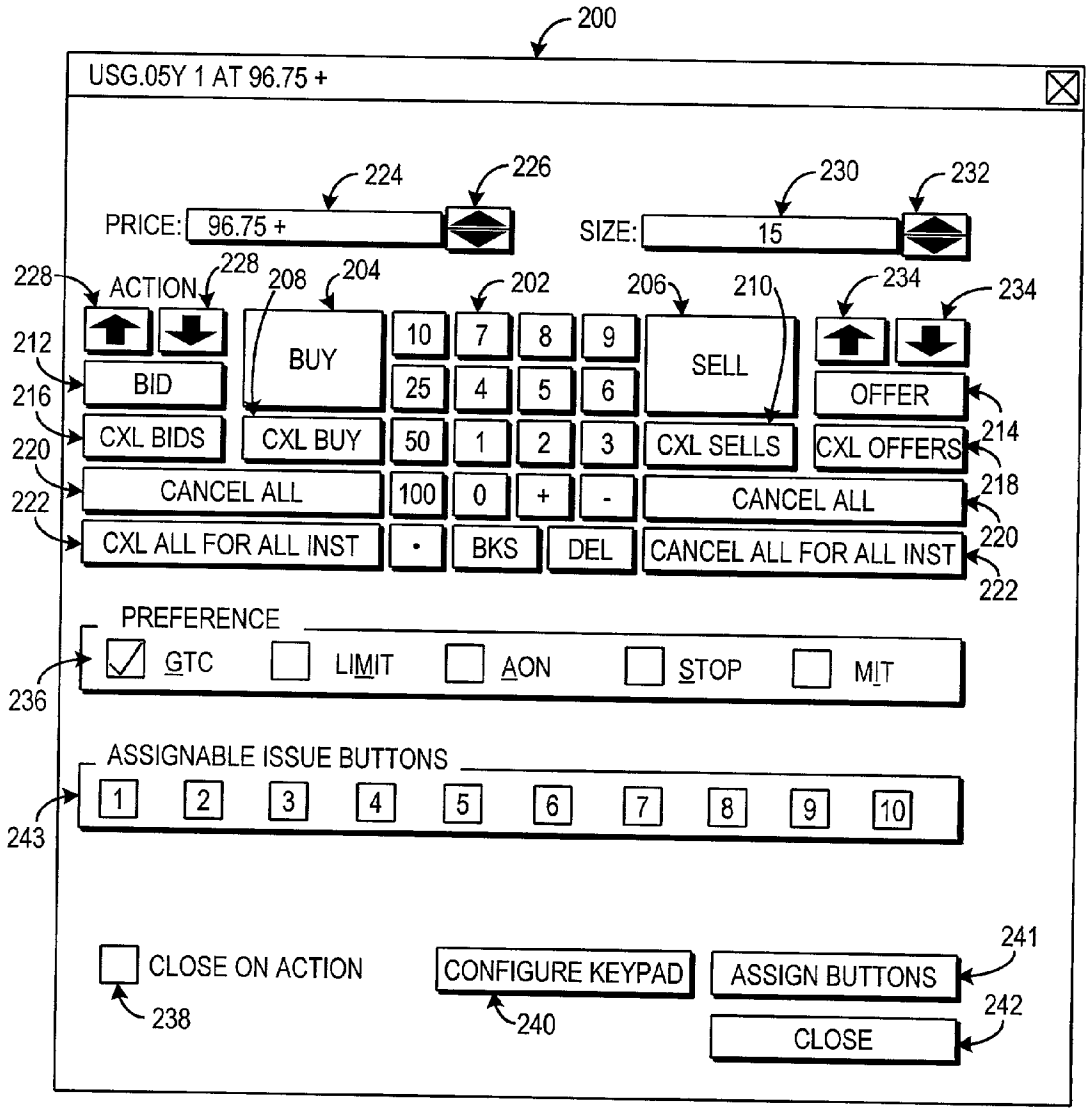

200
USG.05Y 1 AT 96.75 +
224
226
230
232
PRICE: 96.75 +
SIZE: 15
228
ACTION
228
208
204
202
206
210
234
234
212
216
220
222
BID
CXL BIDS
CANCEL ALL
CXL ALL FOR ALL INST
BUY
CXL BUY
10
7
8
9
25
4
5
6
50
1
2
3
100
0
+
-
•
BKS
DEL
SELL
CXL SELLS
CANCEL ALL
CANCEL ALL FOR ALL INST
OFFER
CXL OFFERS
214
218
220
222
PREFERENCE
GTC
LIMIT
AON
STOP
MIT
236
ASSIGNABLE ISSUE BUTTONS
1
2
3
4
5
6
7
8
9
10
243
CLOSE ON ACTION
238
CONFIGURE KEYPAD
240
ASSIGN BUTTONS
241
CLOSE
242

FIG. 2

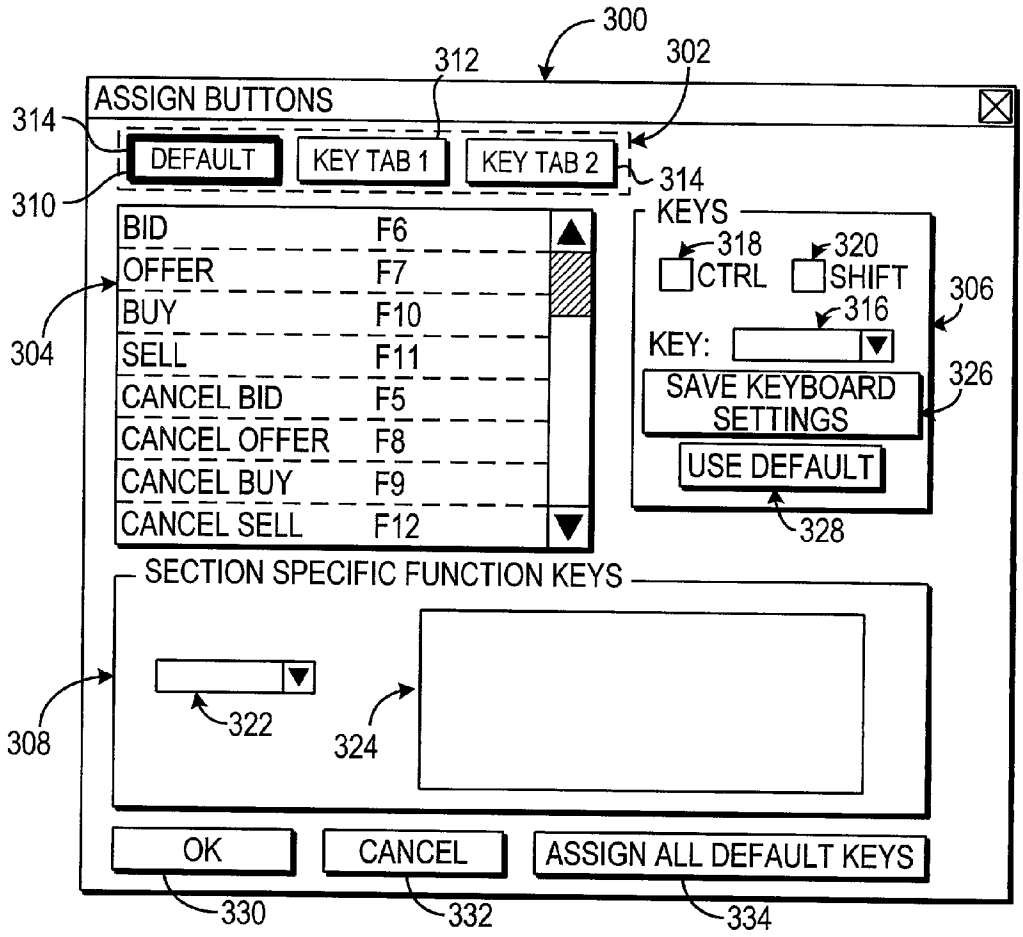

300
302
312
ASSIGN BUTTONS
314
DEFAULT
KEY TAB 1
KEY TAB 2
314
310
BID F6
OFFER F7
BUY F10
SELL F11
CANCEL BID F5
CANCEL OFFER F8
CANCEL BUY F9
CANCEL SELL F12
304
KEYS
318 CTRL
320 SHIFT
316
KEY:
306
SAVE KEYBOARD SETTINGS
326
USE DEFAULT
328
SECTION SPECIFIC FUNCTION KEYS
308
322
324
OK
CANCEL
ASSIGN ALL DEFAULT KEYS
330
332
334

FIG. 3

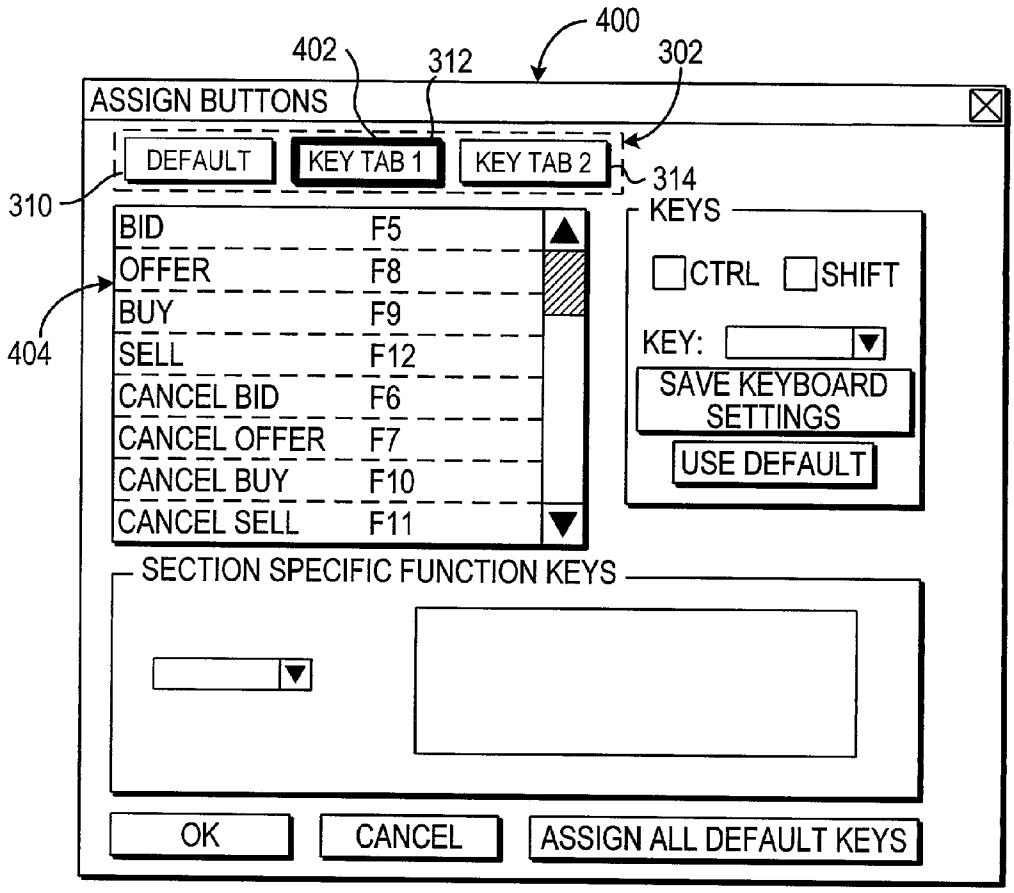

400
402
312
302
ASSIGN BUTTONS
DEFAULT
KEY TAB 1
KEY TAB 2
314
310
404
BID F5
OFFER F8
BUY F9
SELL F12
CANCEL BID F6
CANCEL OFFER F7
CANCEL BUY F10
CANCEL SELL F11
KEYS
CTRL
SHIFT
KEY:
SAVE KEYBOARD SETTINGS
USE DEFAULT
SECTION SPECIFIC FUNCTION KEYS
OK
CANCEL
ASSIGN ALL DEFAULT KEYS

FIG. 4

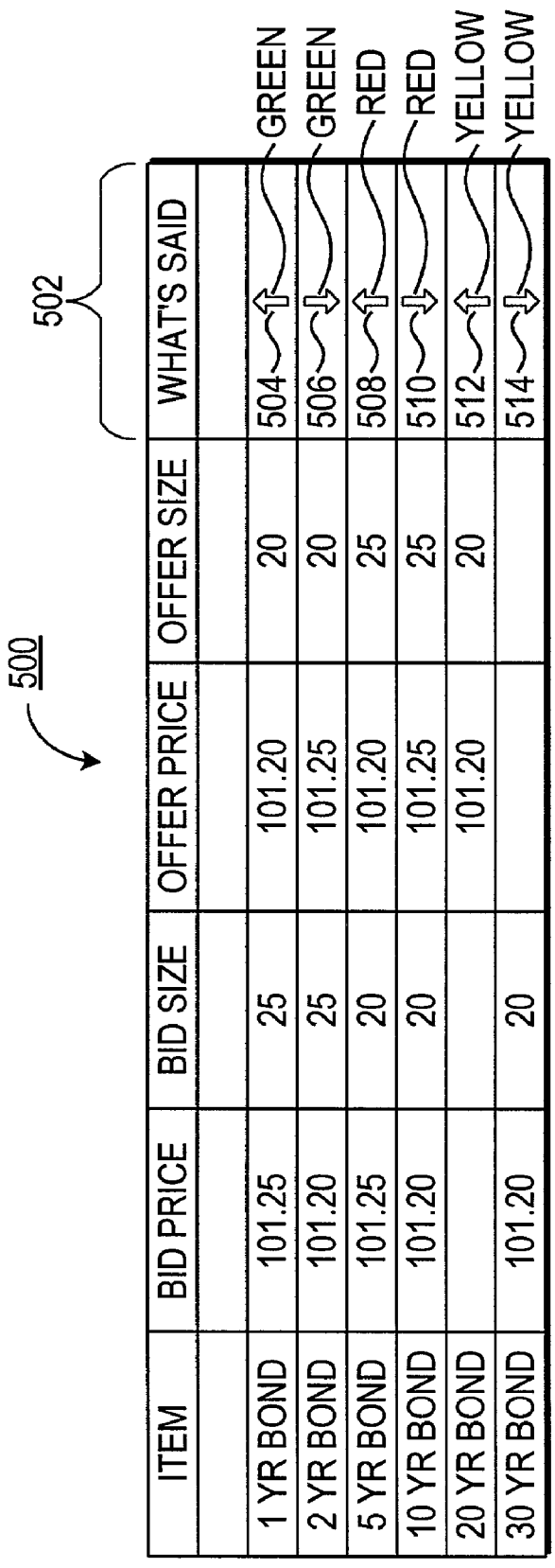

500
502
ITEM
BID PRICE
BID SIZE
OFFER PRICE
OFFER SIZE
WHAT'S SAID
1 YR BOND
101.25
25
101.20
20
504
GREEN
2 YR BOND
101.20
25
101.25
20
506
GREEN
5 YR BOND
101.25
20
101.20
25
508
RED
10 YR BOND
101.20
20
101.25
25
510
RED
20 YR BOND
101.20
20
512
YELLOW
30 YR BOND
101.20
20
514
YELLOW

FIG. 5

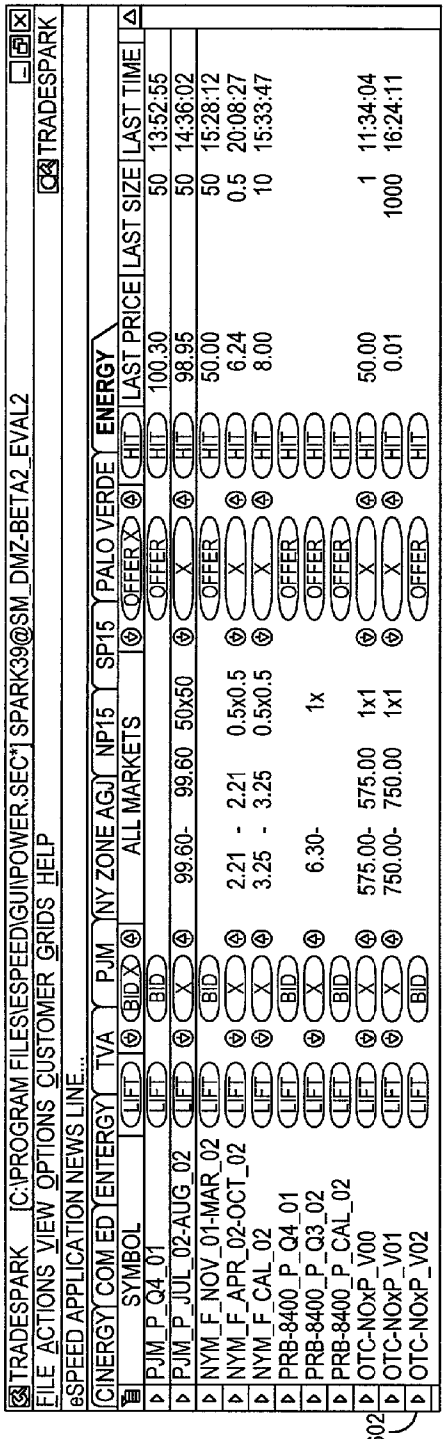

600
TRADESPARK C:\PROGRAM FILES\ESPEED\GUI\POWER.SEC*1 SPARK39@SM_DMZ-BETA2_EVAL2
FILE ACTIONS VIEW OPTIONS CUSTOMER GRIDS HELP
TRADESPARK
eSPEED APPLICATION NEWS LINE...
C!NERGY COM ED ENTERGY TVA PJM NY ZONE AG NP15 SP15 PALO VERDE ENERGY
SYMBOL LIFT BID/X ALL MARKETS OFFER/X HIT LAST PRICE LAST SIZE LAST TIME
PJM_P_Q4_01 LIFT BID OFFER HIT 100.30 50 13:52:55
PJM_P_JUL_02-AUG_02 LIFT X 99.60- 99.60 50x50 X HIT 98.95 50 14:36:02
NYM_F_NOV_01-MAR_02 LIFT BID OFFER HIT 50.00 50 15:28:12
NYM_F_APR_02-OCT_02 LIFT X 2.21 - 2.21 0.5x0.5 X HIT 6.24 0.5 20:08:27
NYM_F_CAL_02 LIFT X 3.25 - 3.25 0.5x0.5 X HIT 8.00 10 15:33:47
PRB-8400_P_Q4_01 LIFT BID OFFER HIT
PRB-8400_P_Q3_02 LIFT X 6.30- 1x OFFER HIT
PRB-8400_P_CAL_02 LIFT BID OFFER HIT
OTC-NOxP_V00 LIFT X 575.00- 575.00 1x1 X HIT 50.00 1 11:34:04
OTC-NOxP_V01 LIFT X 750.00- 750.00 1x1 X HIT 0.01 1000 16:24:11
OTC-NOxP_V02 LIFT BID OFFER HIT
602

FIG. 6

700
TRADESPARK C:\PROGRAM FILES\ESPEED\GUI\POWER.SEC*1 SPARK39@BETA10
FILE ACTIONS VIEW OPTIONS CUSTOMER STATUS HELP
TRADESPARK
eSPEED APPLICATION NEWS LINE...
718
702
704
704
C!NERGY COM ED ENTERGY TVA RJM NY ZONE AG NP15 SP15 PALO VERDE ENERGY
SYMBOL LIFT BID/X ALL MARKETS OFFER/X HIT LAST PRICE LAST SIZE LAST TIME
PJM_P_JUL_02-AUG_02 LIFT X 99.70- 99.90 100x50 X HIT 99.85 50 16:08:08 09/04/01
LIFT JOIN 99.65- 100.00 50x50 720 JOIN 702 HIT
LIFT X 99.60- 100.05 50x150 X HIT
LIFT JOIN 99.55- 100.10 50x50 JOIN HIT
JOIN 702 99.50- 50x OFFER HIT
NYM_F_NOV_01-MAR_0 LIFT X 3.05 - 3.05 0.5x0.5 X HIT 40.00 50 10:38:26 09/04/01
2 LIFT JOIN 3.0475- 3.055 0.5x0.5 JOIN HIT
LIFT JOIN 716 3.045 - 3.0575 0.5x0.5 JOIN HIT
LIFT JOIN 3.0425- 3.0625 0.5x0.5 JOIN HIT
LIFT JOIN 3.0375- 3.065 0.5x0.5 JOIN HIT
NYM_F_CAL_02 LIFT JOIN 2.745 - 2.755 0.5x1 X HIT 2.752 0.5 16:08:26 09/04/01
LIFT X 2.7425- 2.7575 1x0.5 JOIN HIT
LIFT JOIN 2.74 - 2.76 0.5x0.5 JOIN HIT
710 JOIN 2.7375- 0.5x OFFER HIT
708 BID 714 712

FIG. 7

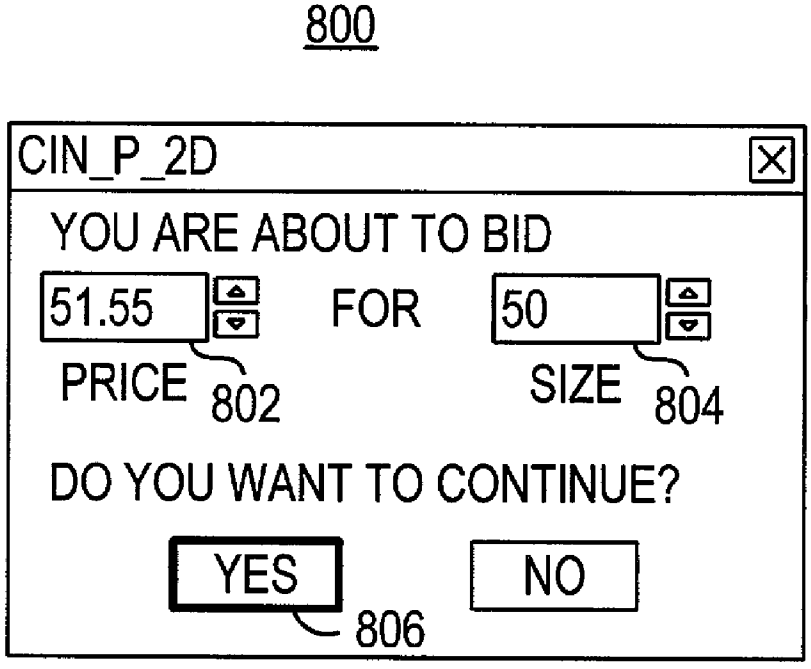

800
CIN_P_2D
YOU ARE ABOUT TO BID
51.55
FOR
50
PRICE
802
SIZE
804
DO YOU WANT TO CONTINUE?
YES
NO
806

FIG. 8

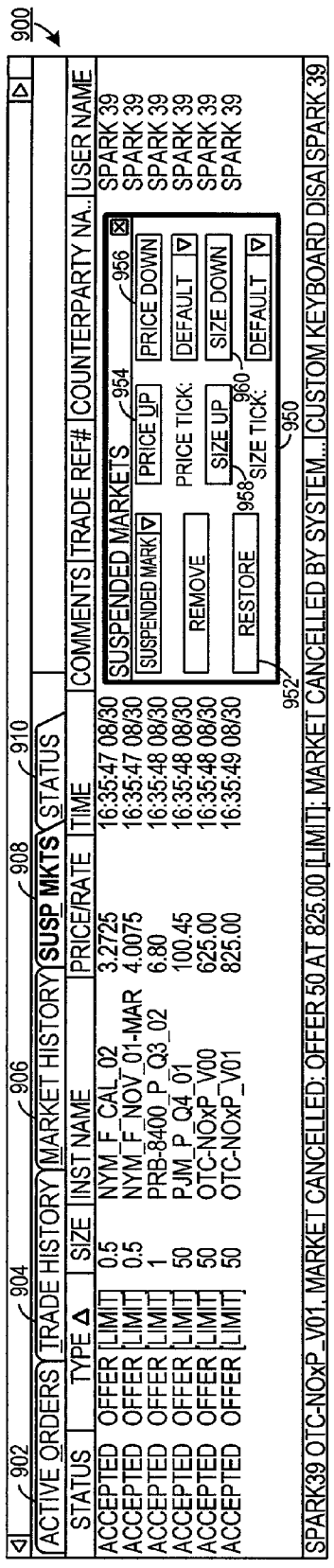

900
902
904
906
908
910
ACTIVE ORDERS | TRADE HISTORY | MARKET HISTORY | SUSP MKTS | STATUS
STATUS | TYPE | SIZE | INST NAME | PRICE/RATE | TIME | COMMENTS | TRADE REF# | COUNTERPARTY NA.. | USER NAME
ACCEPTED OFFER LIMIT 0.5 NYM_F_CAL_02 3.2725 16:35:47 08/30 SPARK 39
ACCEPTED OFFER LIMIT 0.5 NYM_F_NOV_01-MAR 4.0075 16:35:47 08/30 SPARK 39
ACCEPTED OFFER LIMIT 1 PRB-8400_P_Q3_02 6.80 16:35:48 08/30 SPARK 39
ACCEPTED OFFER LIMIT 50 PJM_P_Q4_01 100.45 16:35:48 08/30 SPARK 39
ACCEPTED OFFER LIMIT 50 OTC-NOxP_V00 625.00 16:35:48 08/30 SPARK 39
ACCEPTED OFFER LIMIT 50 OTC-NOxP_V01 825.00 16:35:49 08/30 SPARK 39
SUSPENDED MARKETS
954
956
SUSPENDED MARK
PRICE UP
PRICE DOWN
REMOVE
PRICE TICK:
DEFAULT
SIZE UP
SIZE DOWN
960
RESTORE
968
SIZE TICK:
DEFAULT
952
950
SPARK39 OTC-NOxP_V01. MARKET CANCELLED: OFFER 50 AT 825.00 [LIMIT]: MARKET CANCELLED BY SYSTEM... CUSTOM KEYBOARD DISA SPARK 39

FIG. 9

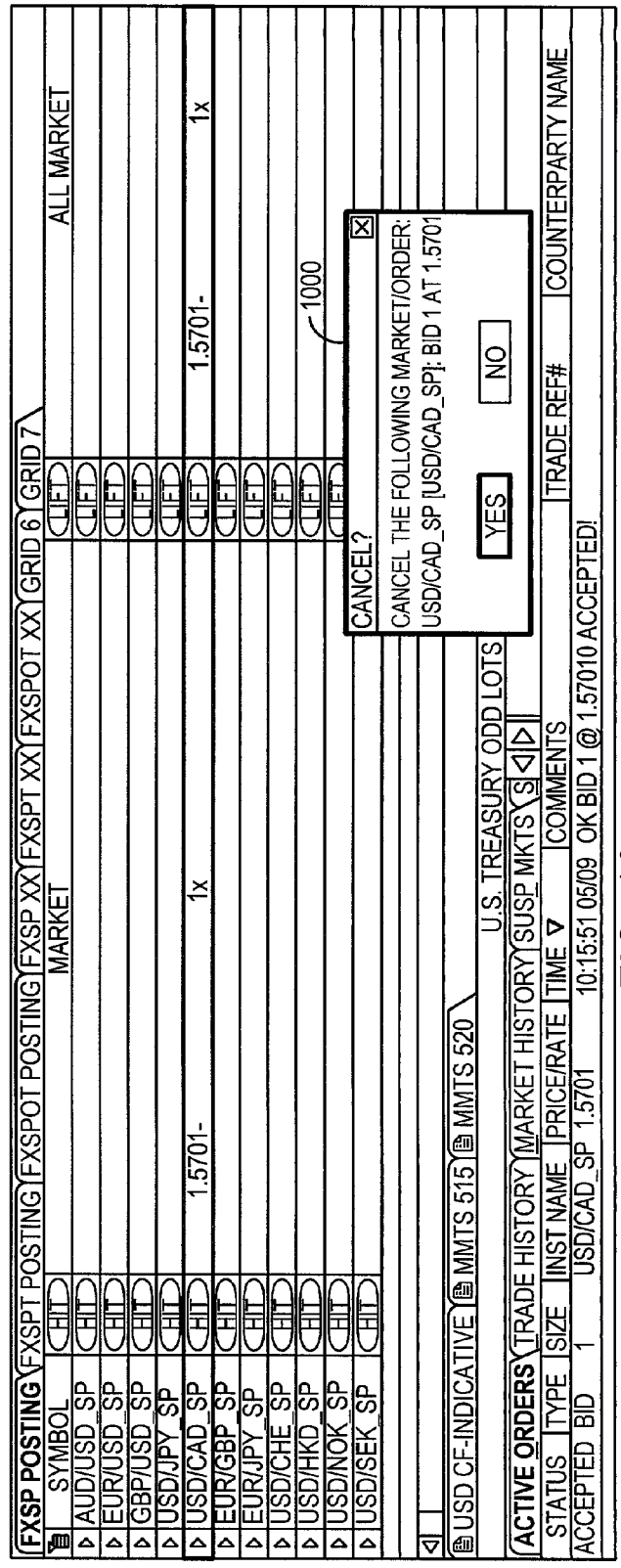

FXSP POSTING | FXSPT POSTING | FXSPOT POSTING | FXSP XX | FXSPT XX | FXSPOT XX | GRID 6 | GRID 7
SYMBOL | HIT | MARKET | LIFT | ALL MARKET
AUD/USD_SP HIT LIFT
EUR/USD_SP HIT LIFT
GBP/USD_SP HIT LIFT
USD/JPY_SP HIT LIFT
USD/CAD_SP HIT 1.5701- 1x LIFT 1.5701- 1x
EUR/GBP_SP HIT LIFT
EUR/JPY_SP HIT LIFT
USD/CHE_SP HIT LIFT
USD/HKD_SP HIT LIFT 1000
USD/NOK_SP HIT LIFT
USD/SEK_SP HIT LIFT
CANCEL?
CANCEL THE FOLLOWING MARKET/ORDER:
USD/CAD_SP [USD/CAD_SP]: BID 1 AT 1.5701
YES
NO
USD CF-INDICATIVE | MMTS 515 | MMTS 520
U.S. TREASURY ODD LOTS
ACTIVE ORDERS | TRADE HISTORY | MARKET HISTORY | SUSP MKTS
STATUS | TYPE | SIZE | INST NAME | PRICE/RATE | TIME | COMMENTS | TRADE REF# | COUNTERPARTY NAME
ACCEPTED BID 1 USD/CAD_SP 1.5701 10:15:51 05/09 OK BID 1 @ 1.57010 ACCEPTED!

FIG. 10

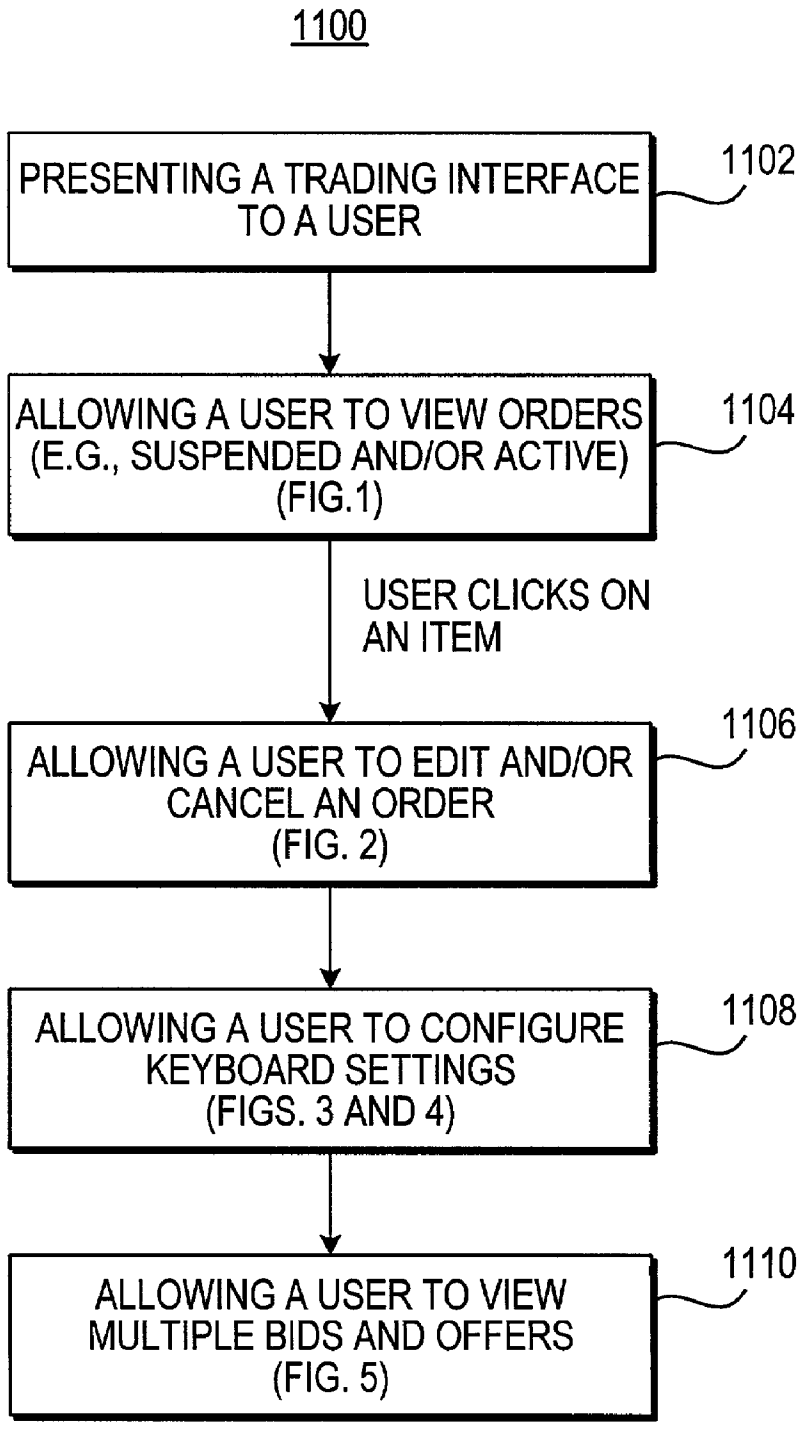

1100
PRESENTING A TRADING INTERFACE TO A USER
1102
ALLOWING A USER TO VIEW ORDERS (E.G., SUSPENDED AND/OR ACTIVE) (FIG.1)
1104
USER CLICKS ON AN ITEM
ALLOWING A USER TO EDIT AND/OR CANCEL AN ORDER (FIG. 2)
1106
ALLOWING A USER TO CONFIGURE KEYBOARD SETTINGS (FIGS. 3 AND 4)
1108
ALLOWING A USER TO VIEW MULTIPLE BIDS AND OFFERS (FIG. 5)
1110

FIG. 11

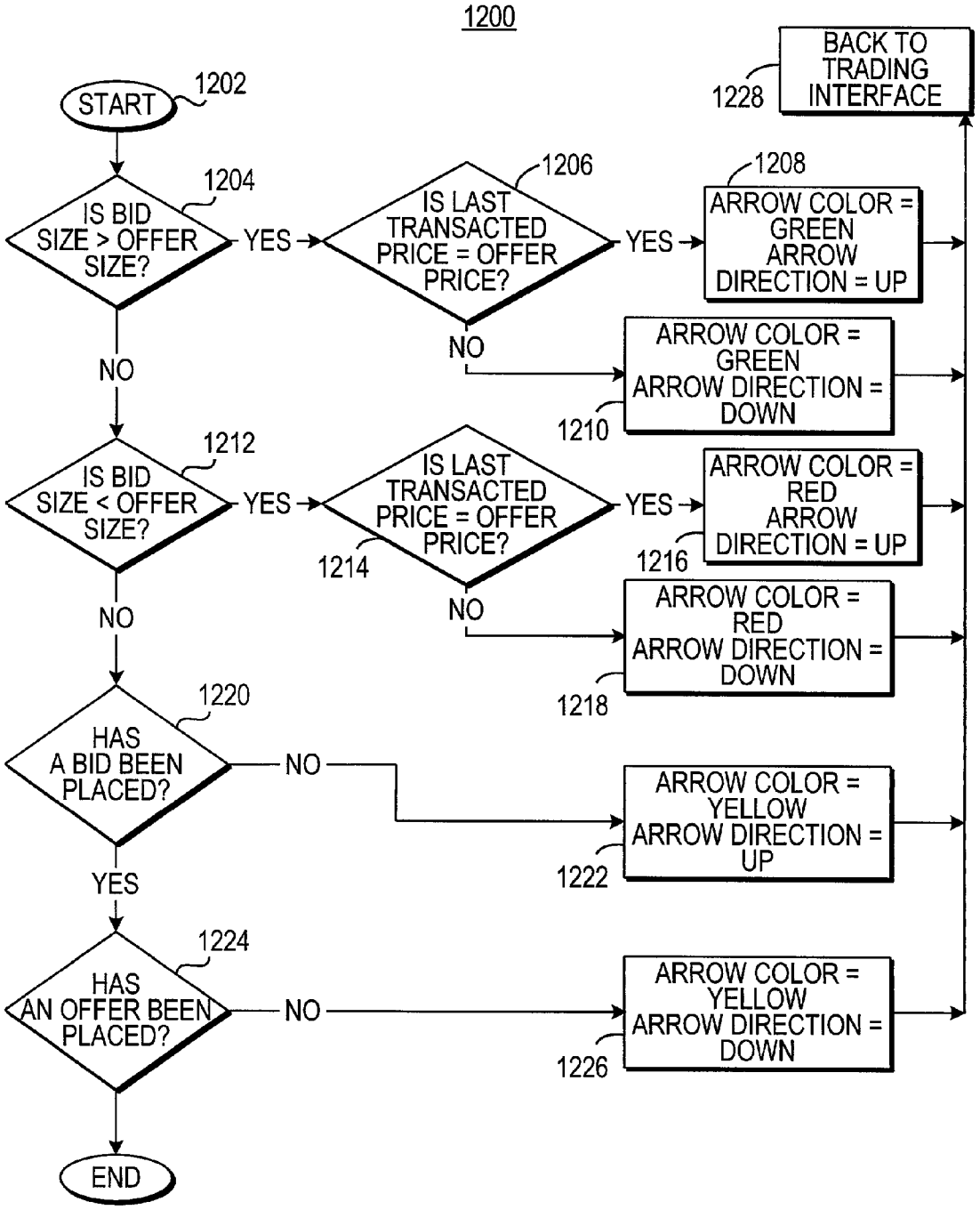

1200
START
1202
IS BID SIZE > OFFER SIZE?
1204
YES
IS LAST TRANSACTED PRICE = OFFER PRICE?
1206
YES
ARROW COLOR = GREEN ARROW DIRECTION = UP
1208
NO
ARROW COLOR = GREEN ARROW DIRECTION = DOWN
1210
BACK TO TRADING INTERFACE
1228
NO
IS BID SIZE < OFFER SIZE?
1212
YES
IS LAST TRANSACTED PRICE = OFFER PRICE?
1214
YES
ARROW COLOR = RED ARROW DIRECTION = UP
1216
NO
ARROW COLOR = RED ARROW DIRECTION = DOWN
1218
NO
HAS A BID BEEN PLACED?
1220
NO
ARROW COLOR = YELLOW ARROW DIRECTION = UP
1222
YES
HAS AN OFFER BEEN PLACED?
1224
NO
ARROW COLOR = YELLOW ARROW DIRECTION = DOWN
1226
END

FIG. 12

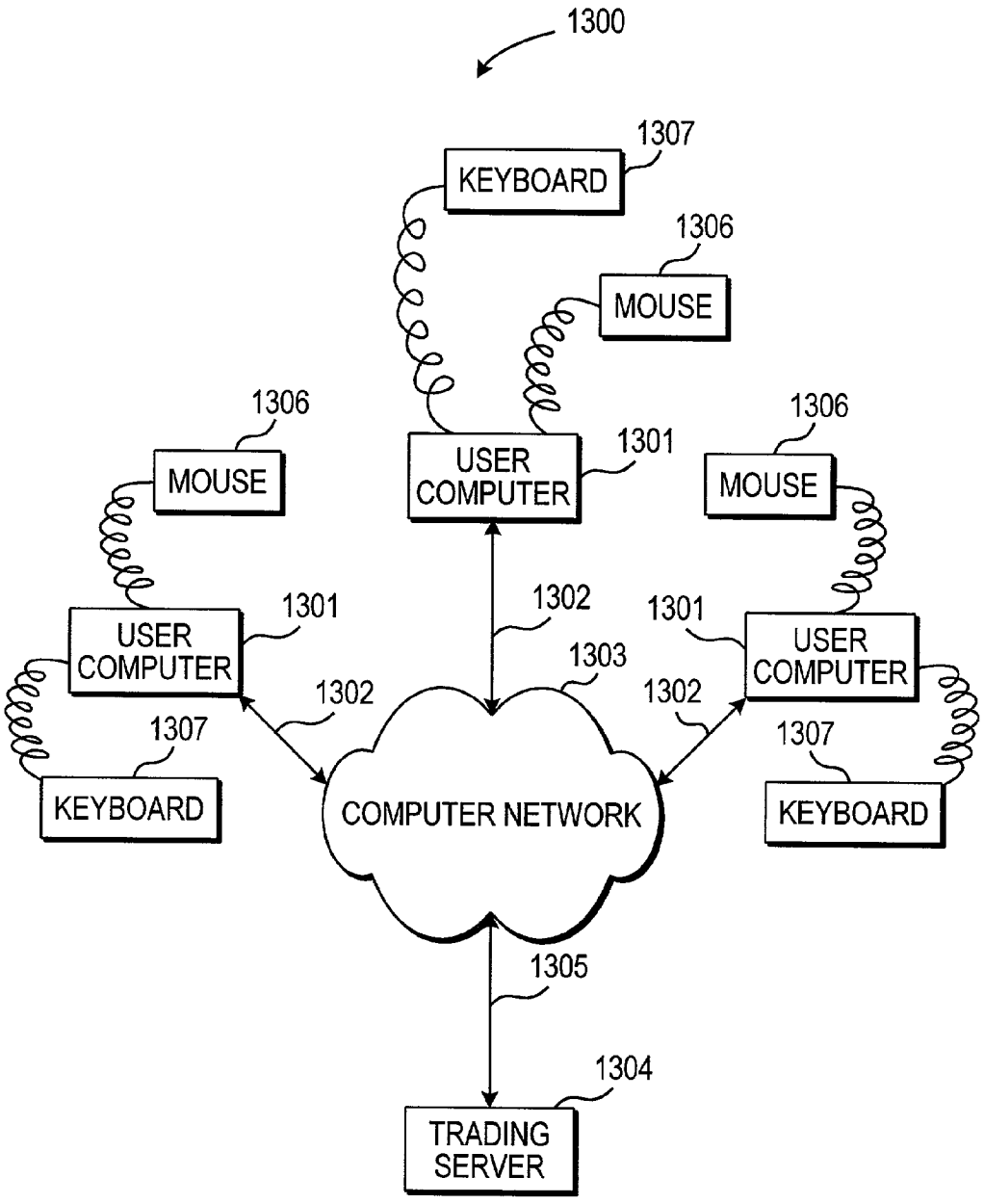

1300
1307
KEYBOARD
1306
MOUSE
1306
MOUSE
1306
MOUSE
USER COMPUTER
1301
1301
USER COMPUTER
1301
USER COMPUTER
1302
1303
1302
1302
1307
KEYBOARD
1307
KEYBOARD
COMPUTER NETWORK
1305
1304
TRADING SERVER

FIG. 13

SYSTEMS AND METHODS FOR PROVIDING A TRADING INTERFACE WITH ADVANCED FEATURES

CROSS-REFERENCE TO RELATED APPLICATION

[0001] This application claims the benefit of U.S. provisional application No. 60/290,719, filed May 14, 2001, which is hereby incorporated by reference herein in its entirety.

BACKGROUND OF THE INVENTION

[0002] This invention relates to systems and methods for providing a trading interface. More particularly, this invention relates to systems and methods for providing a trading interface with advanced features.

[0003] Electronically based trading systems have gained widespread popularity in recent years. Such trading systems are frequently used for trading items ranging from financial instruments (such as stocks, bonds, currency, futures contracts, etc.) to household goods (such as old records, antiques, wines, etc.). In many of these trading systems, bid/offer-hit/take processes are used to negotiate a sale of a given item. In connection with such processes, bids and/or offers for items are entered into a trading system and a hit or take is submitted in response to a bid or an offer, respectively, to agree to a sale.

[0004] Today, these trading systems are being developed with advanced processing circuitry and sufficient memory to support new types of software applications not previously envisioned. A challenge created by the new types of software applications is the ability to offer advanced features consistent with users' expectations of a trading interface environment. Advanced trading systems may provide features that to improve a user's efficiency, speed, and accuracy.

[0005] In view of the foregoing, it would be desirable to provide enhanced features and applications for a trading interface environment.

SUMMARY OF THE INVENTION

[0006] In accordance with this and other objects of the invention, systems and methods provide trading interfaces with advanced features. More particularly, in accordance with this invention, the user can use various trading interfaces to create orders, manipulate orders, cancel orders, configure alternative keyboard settings, and obtain additional information on transactions.

[0007] The bids and/or offers may be inputted via the trading interface. Users may use a keyboard and/or mouse to navigate through the trading interface. An example of a trading interface is discussed in Kirwin et al. U.S. patent application Ser. No. 09/745,651, filed Dec. 22, 2000, which is hereby incorporated by reference herein in its entirety.

[0008] The bids and/or offers may be manipulated with a mouse-based interface. If a user clicks on a bid and/or offer, a dialog box may pop-up, thereby providing the user with multiple options. The dialog box may allow the user to cancel an order if necessary or edit an order and change the prices or sizes.

[0009] In another approach, bids and/or offers may be edited with a keyboard. A user may highlight one or more bids and/or offers. The user may adjust the prices up and down by pressing the page up and page down keys. The user may also press the left and right arrows to decrease and increase the size amount.

[0010] To enable customization of the keyboard settings to a user's preference, a keyboard settings feature is provided. This feature may allow users to configure the keyboard as they wish and save their settings as separate keyboard settings. A user may switch to his or her preferred keyboard setting by clicking through tabs of multiple saved keyboard configurations.

[0011] Users may also be provided with additional information relating to the last transacted price (e.g., bid or offer price). Instead of the conventional combination of arrow color and direction representing the direction of the market, the user may be provided with such a combination representing whether a buyer or a seller wishes to place bids and/or offers.

BRIEF DESCRIPTION OF THE DRAWINGS

[0012] The above and other objects and advantages of the invention will be apparent upon consideration of the following detailed description, taken in conjunction with the accompanying drawings, in which like reference characters refer to like parts throughout, and in which:

[0013] **FIG. 1** is an illustration of a trading interface that may be generated in accordance with certain embodiments of the present invention.

[0014] **FIG. 2** is an illustration of a dialog window that may be generated in accordance with certain embodiments of the present invention.

[0015] **FIGS. 3 and 4** are illustrations of keyboard settings windows that may be generated in accordance with certain embodiments of the present invention.

[0016] FIGS. **5-7** are illustration of a trading summary windows that may be generated in accordance with certain embodiments of the present invention.

[0017] **FIG. 8** is an illustrations of a dialog window that may be generated in accordance with certain embodiments of the present invention.

[0018] **FIGS. 9 and 10** are illustrations of an active orders windows that may be generated in accordance with certain embodiments of the present invention.

[0019] **FIG. 11** is a flow diagram of a main process that may be used to perform the functions illustrated in FIGS. **1-10** in accordance with certain embodiments of the present invention.

[0020] **FIG. 12** is a flow diagram of a process that may be used to determine the additional information provided to the user in accordance with certain embodiments of the present invention.

[0021] **FIG. 13** is a block diagram of a trading system in accordance with certain embodiments of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0022] FIGS. **1-10** are illustrative examples of screen displays that may be presented in certain embodiments of

the present invention. It should be noted that the interfaces presented here are only for illustrative purposes and various features, within the scope of the invention, may be added to or removed from the interfaces. Furthermore, for the purpose of clarity, and not by way of limitation, the displays, techniques, or methods herein are demonstrated primarily in the context of financial instruments.

[0023] Systems and methods for providing a trading interface are also described in, for example, the above-mentioned Kirwin et al. U.S. patent application Ser. No. 09/745,651, filed Dec. 22, 2000. As discussed, a user may bid for, offer to sell, buy, and/or sell an item by submitting a trading command indicating the action to be taken using various approaches. The user may submit the trading command by using a keyboard to input a command-line interface, by using a mouse with a graphical interface, a combination of the two, or any other suitable approach.

[0024] When the user has finished creating an order, the user may be presented with a trading summary display screen **100**. Display screen **100** may include existing orders **102** comprising one or more bids and/or offers made by the user. For example, display screen **100** shows the user's active and suspended bids on "U.S. Treasury Bonds" (e.g., 1 year bond, 2 year bond, 5 year bond, etc.). Display **100** may also include the item, the size, the price, and the status for each bid. As shown in display **100**, existing bids may receive a status of suspended or active.

[0025] To efficiently manipulate orders, the present invention preferably includes a feature that provides multiple editing options to the user. In accordance with this feature, for example, when a user clicks on a bid **104** (e.g., 5 year bond as depicted in **FIG. 1**) in trading summary display screen **100**, a dialog window **200** may popup. Dialog window **200**, however, may already be open. In this embodiment, the user may cancel the bid, edit the bid, and change the prices and/or sizes. Alternately, the user may click on multiple bids and multiple dialog windows may pop-up.

[0026] In another approach, when a user edits active and/or suspended orders with a keyboard, the user may select a bid **104** such that dialog window **200** pops-up. The user may adjust the price up and down, for example, by pressing the "page up" and "page down" keys on the keyboard, respectively. The user may press, for example, the left arrow and right arrow keys to decrease and increase the size of the bid, respectively. Multiple bids may be selected and altered simultaneously.

[0027] As shown in **FIG. 2**, the graphical interface comprises a dialog window **200** with various buttons and entry fields **202-242**. Using these buttons and entry fields, a user may edit a bid command, an offer command, a buy command, or a sell command for an item corresponding to a trading summary display screen **100**. Preferably, each traded item uses a unique dialog window **200**. Dialog window **200** may be opened automatically and/or manually before, during, and/or after a trade, and may allow a user to submit a trade command at any time. The dialog window may be repositioned on a user's display and/or fixed in place. The number of dialog windows **200** that can be kept open at any one time is preferably unlimited.

[0028] As shown in **FIG. 2**, dialog window **200** may comprise a variety of on-screen buttons and entry fields. Generally, a button, as displayed in box **200**, may be "pushed" by placing a pointing device's pointer over the button and pressing a switch on the pointing device, as is commonly known in the art. At the center of window **200**, a numeric keypad **202** may be displayed. The numeric keypad **202** may provide buttons for numbers zero through nine, and may contain buttons for numbers ten, twenty-five, fifty, and one hundred or any other suitable or desirable values. The numeric keypad **202** may also contain a plus button ("+"), a minus button ("−"), a decimal point button ("."), a backspace button ("BKS"), and a delete button ("DEL").

[0029] In addition to displaying a numeric keypad as described above, dialog window **200** may also provide a user with a buy button **204**, a sell button **206**, a cancel buys button **208**, a cancel sells button **210**, a bid button **212**, an offer button **214**, a cancel bids button **216**, a cancel offers button **218**, cancel all buttons **220**, cancel all for all instruments button **222**, a price entry field **224**, price up and down buttons **226**, bid price up and down buttons **228**, offer price up and down buttons **234**, a size entry field **230**, and size up and down buttons **232**. Finally, dialog window **200** may contain a preference field **236** that allows a user to specify preferred types of orders, a close-on-action box **238** that causes dialog window **200** to be automatically closed after specified actions are performed, a configure keypad button **240** that allows a user to arrange the keypad for dialog window **200**, a close button **242** that closes the dialog window **200** on demand, and an assign buttons button **241** that allows a user to define alternative keyboard settings.

[0030] Dialog window **200** may also include assignable issue buttons **243**. Assignable issue buttons **243** may allow a user to select the user's preferred keyboard settings. Assignable issue buttons **243** may correspond to a previously configured keyboard setting. For example, a "1" button may correspond to the first set of keyboard settings. Multiple keyboard settings may be configured by selecting the assign buttons button **241** (to be discussed in further detail below).

[0031] Preference field **236** may be used to indicate the user's preferred trade type and may allow the user to select any type of trade that a particular exchange or trading system supports. Although **FIG. 2** provides specific examples of trade types (e.g., good-till-canceled (GTC), limit, all-or-none (AON), stop, and market-if-touched (MIT)), the invention may be implemented with any type of trade.

[0032] Configure keypad button **240** may allow a user to arrange buttons appearing in dialog window **200** to be anywhere a user prefers by first pressing the configure keypad button **240**, by then dragging the buttons to new positions, and finally by clicking on button **240** again. Also, the configuration or re-configuration of buttons can change the function of those buttons depending on the type of trading desired or what type of item is being traded.

[0033] Assign buttons button **241** may allow a user to configure the keyboard and save the user's preferred settings as an alternate keyboard setting, while retaining the default keyboard setting. Once the user clicks on the assign buttons button **241**, the user may be presented with assign buttons window **300** as shown in **FIG. 3**. Assign buttons window **300** may include saved settings tabs **302**, settings list **304**, key assigning menu **306**, and specific function keys menu **308**.

[0034] Saved settings tabs **302** may allow a user to select a saved keyboard configuration. As shown, the user may select "Default" tab **308**, "Key Tab 1" tab **310**, or "Key Tab 2" tab **312**. As shown by highlight **314**, the user has selected the "Default" tab **308**. It should be noted that the number of tabs **302** that the user may select is preferably unlimited.

[0035] Settings list **304** may provide the user with the capability to view a list of saved function keys. That is, the user may scroll through settings list **304** to view the key assigned to a particular function. For example, settings list **304** shows that the "Bid" function may be executed by pressing "F6" on the keyboard. Settings list **304** may be updated periodically (e.g., after every key assigned, once "OK" button **330** is pressed, etc.)

[0036] Now referring to **FIG. 4**, when the user selects another saved settings tab, the user may be presented with assign buttons window **400**. As shown, the user selected "Key Tab 1" by highlighting the appropriate tab **312**. Assign buttons window **400** may provide the user with a settings list **404** that shows the command functions paired with keyboard settings corresponding to tab **312**.

[0037] Now referring back to **FIG. 3**, key assigning menu **306** may allow a user to configure the keyboard and save the keyboard setting. Key assigning menu **306** may include a key list **316**, a "Ctrl" box **318**, and a "Shift" box **320**. Key list **316**, if selected, may provide the user with a drop-down menu of multiple keys on the keyboards. When the user selects "Ctrl" box **318**, the user may perform the associated function by pressing the "Ctrl" key on the keyboard in combination with the key chosen in key list **316**. For example, the user may wish to execute the "Buy" function when the user presses the "Ctrl" key and the "B" key simultaneously on the keyboard. Similarly, when the user selects "Shift" box **318**, the user may perform the associated function by pressing the "Shift" key on the keyboard in combination with the key chosen in key list **316**.

[0038] The one or more keys selected in key assigning menu **306** may correspond to the function chosen in specific function keys menu **308**. Specific function keys menu **308** may include functions list **322** and previous settings list **324**. Functions list **322**, if selected, may provide the user with a drop-down menu of pre-defined functions (e.g., buy, sell, cancel bid, cancel offer, etc.). Once the user selects a function from functions list **322**, previous settings list **324** may present the keys previously assigned to the selected function. The user may associate the selected function with the selected keys by selecting save settings button **326**, which may be provided in key assigning menu **306**. Alternately, the user may select "Use Default" button **328** to assign the function with the key or keys pre-determined by the trading system. For example, the bid function under "Key Tab 1" may be assigned a default key of "F7."

[0039] Finally, when the user has completed configuring alternative keyboard settings, the user may select "OK" button **330**, "Cancel" button **332**, and/or "Assign All Default Keys" button **334**. "OK" button **330** and "Cancel" button **332** may be used to either confirm changes or cancel the changes selected in assign buttons menu **300**, respectively. "Assign All Default Keys" button **334**, if selected, cancels the changes selected in assign buttons menu **300** and assigns the default settings to the selected tab (e.g., tab **310**, tab **312**, tab **314**, etc.).

[0040] One advantage of this feature is the multiple options provided to the user and the increase in overall flexibility.

[0041] In some embodiments, a user may be presented with a bids and offers display screen **500**. Bids and offers display screen **500** may allow the user to view multiples bids and offers placed for an item. For example, display screen **500** shows that an item being traded is a 1 year U.S. Treasury Bond. A bid for twenty-five 1 year bonds at $101.25 was placed, while there is an offer for twenty 1 year bonds at $101.20.

[0042] Display screen **500** may also include a "What's Said" column **502**. Instead of conventional combination arrow colors and directions representing the direction of the market, the user may be provided with "What's Said" column **502** that combines arrow colors and directions to represent whether a buyer or seller desires to transact.

[0043] Arrow **504** is a green arrow that points up, which may indicate that the offer price of the seller was paid and that the buyer desires to transact for a size greater than the offer size from the seller. For example, the color green may indicate that the buyer's bid size is greater than the offer size. That is, the buyer wishes to buy more bonds. Arrow **504** is pointing upward which may indicate that the offer price is paid. Alternately, arrow **506** is a green arrow that points down, which may indicate that the bid price of the buyer was given.

[0044] Display screen **500** shows arrows **508** and **510** as red arrows. The color red may indicate that the seller's offer size is greater than the buyer's bid size, thereby showing that the buyer wants to sell more of an item. Again, arrow **508** points up to indicate that the offer price was paid, while arrow **510** points down to indicate that the bid price was given.

[0045] Display screen **500** shows arrows **512** and **514** as yellow arrows. The color yellow may indicate that a buyer or a seller does not wish to make a transaction. Arrow **512** points up to indicate that a seller has placed an offer, however, there are no current bids. Arrow **514** points down to indicate that a buyer has placed a bid, however, there are no current offers.

[0046] It should be noted that any arrow color may be used. In some embodiments, display screen **500** may allow the user to select the color or other characteristic of the transaction. Although arrows are used in FIGS. **1-5**, it should also be noted that any suitable visual indicator may be used.

[0047] In another suitable approach, the user may be provided with a bids and offers display screen **600** as shown in **FIG. 6**. Bids and offers display screen **600** may allow the user to view multiples bids and offers placed for an item. For example, display screen **600** shows that an item being traded is "NYM_F_CAL_02". Display screen **600** may also include, for example, selectable tabs corresponding to each market. As shown, the user has currently selected an "Energy" tab. In response, the user may be provided with bids and offers placed for items in an energy market.

[0048] As shown in **FIG. 6**, display screen **600** may comprise a variety of on-screen buttons and other suitable visual indicators. Generally, a button, as displayed in display screen **600**, may be "pushed" or "selected" by placing a

pointing device's pointer over the button and pressing a switch on the pointing device, as is commonly known in the art. The user may be provided with, for example, an expand button **602**. In response to the user selecting button **602**, the user may be provided with a detailed bids and offers display screen **700** as shown in **FIG. 7**. Providing the user with the ability to expand market rows may assist the user in viewing the depth of prices in the selected market.

[**0049**] Display screen **700** of **FIG. 7** may include, for example, a list of bids and offers for an item. In some embodiments, display screen **700** may provide the user with selectable arrow buttons **702**. Selectable arrow buttons **702** may allow the user to adjust existing orders. For example, selecting an up arrow may automatically increase the user's order by a predetermined amount (e.g., 0.50, 1.0, etc.). In response to the user selecting one of selectable arrow buttons **702**, the user may be provided with a dialog window **800**.

[**0050**] Dialog window **800** may prompt the user to confirm the modification to the user's existing order. For example, dialog window **800** may include a price **802** and a size **804**. Dialog window **800** may also allow the user to modify the existing order. In response to the user confirming the modification, by, for example, selecting a "Yes" button **806**, the modification to the existing order may be entered. In some embodiments, the user may disable the confirmation feature as shown in **FIG. 8**. For example, the user may disable dialog window **800** by modifying user preferences and deselecting the confirmation feature. In response to disabling the confirmation feature, the user may instantly modify existing orders by selecting one of selectable arrow buttons **702** (**FIG. 7**).

[**0051**] Referring back to **FIG. 7**, display screen **700** may also provide the user with column arrow buttons **704**. In response to the user selecting one of column arrow buttons **704**, all of the user's existing orders listed in display screen **700** may be modified. For example, in response to the user selecting a column up arrow, all of the user's existing orders may be increased by a predetermined amount (e.g., 0.5, 1.0, etc.).

[**0052**] Display screen **700** may also include, for example, buttons that change function depending on the state of the market. This feature is sometimes referred to herein as "Smart" buttons. For example, the user may be provided with smart buttons, such as "Join" buttons **706** shown in display screen **700**. "Join" buttons **706** may be the same as "Bid" or "Offer" buttons, however when a market is made button **706** may change its name to "Join" as this is now the appropriate action when multiple bids and offers are on display screen **700**. "Join" buttons **706** may allow a user to join an existing bid or offer. In response to the user selecting one of "Join" buttons **706**, the user may be provided with a dialog window, such as dialog window **800** of **FIG. 8**, to confirm or adjust the order before entering it into the market. Display screen **700** may also include "Bid" buttons **708** for placing bids, "Lift" buttons **710** for executing a buy order against the existing offers, "Hit" buttons **712** for executing a sell order against the existing bids, and "Offer" buttons **714** for placing offers.

[**0053**] Display **700** may allow the user to cancel an existing bid or offer. As shown in **FIG. 7**, the user may cancel a bid or offer by selecting an "X" button **716** corresponding to an existing bid or offer. In response, the corresponding bid or offer may be automatically cancelled. However, any other suitable approach may also be used. For example, the user may be provided with a cancel window (not shown) that prompts the user to confirm the cancellation of the selected bid or offer.

[**0054**] Display **700** may also allow the user to suspend existing bids or offers. For example, the user may suspend all existing bids by selecting a "Bid X" button **718**. The user may suspend all orders by selecting an "Offer X" button **720**. In response to the user selecting button **718** or button **720**, the user may be provided with an active orders display screen **900** as shown in **FIG. 9**. **FIG. 9** may provide the user with the ability to freely modify the suspended orders and/or restore the bids and offers to the market by, for example, choosing a button that signifies the appropriate action.

[**0055**] Active orders display screen **900** may include existing orders comprising one or more bids and/or offers made by the user. Display screen **900** may include selectable tabs, such as an "Active Orders" tab **902**, a "Trade History" tab **904**, a "Market History" tab **906**, a "Suspended Markets" tab **908**, and a "Status" tab **910**. As shown, the user has currently selected "Suspended Markets" tab **908**. In some embodiments, the user may automatically be provided with display **900** with "Suspended Markets" tab **908** in response to suspending a bid or offer. Under tab **908**, the user may be provided with a list of suspended bids or offers. In response to the user selecting one of suspended bids or offers from display screen **900**, the user may be provided with a dialog window **950**. Dialog window **950** may, for example, allow the user to restore the selected bid or offer (e.g., by selecting a "Restore" button **952**). Dialog window **950** may also provide the user with a "Price Up" button **954**, a "Price Down" button **956**, a "Size Up" button **958**, and a "Size Down" button **960** to modify the selected bid or offer.

[**0056**] Display **900** may allow the user to cancel a suspended bid or offer. In response to the user, for example, selecting a suspended bid or offer with a pointing device (e.g., double-clicking with a mouse), the user may be provided with cancel window **1000**. Window **1000** may prompt the user to cancel the suspended bid or offer. In response to the user selecting a "Yes" button from window **1000**, the suspended bid or offer may be cancelled.

[**0057**] Although illustrated in a particular fashion for trading particular types of items, the present invention, and thus the interfaces shown in FIGS. **1-10**, may be altered to facilitate trading of any type of tradable items. Additionally, although the illustrations above are discussed in connection with bidding for and buying of an item, persons skilled in the art will appreciate that the same features of the present invention are available in the offering for and selling of an item. Offer and sell buttons may be used instead of bid and buy buttons to offer and sell, respectively, an item.

[**0058**] One embodiment of a main process **1100** that may be used to control the presentation of the interfaces illustrated in FIGS. **1-10** is illustrated in **FIGS. 11**. As shown in **FIG. 11**, process **1100** begins at step **1102** by presenting a trading interface to a user. Any suitable trading interface may be used (e.g., the trading summary display screen illustrated in **FIG. 1**). At step **1104**, process **1100** may allow the user to view current bids and/or offers. For example, the user may be presented with a display screen that shows active and suspended bids as illustrated in **FIG. 1**.

[0059] At step **1106**, process **1100** may allow a user to edit one or more bids, for example, by clicking on an item shown in the trading interface of **FIG. 1**. Once a user clicks on an item (e.g., a bid, an offer, etc.) in the trading interface, the user may be presented with a dialog window. The dialog window may allow the user to cancel, edit, and/or change the prices or sizes of the user's order.

[0060] If, at step **1108**, process **1100** determines that the user pushed an assign buttons button, then process **1100** proceeds to present the user with an assign buttons window (as illustrated in FIGS. **3-4**). Process **1100** allows the user to configure one or more alternative keyboard settings.

[0061] Once the user has completing creating or configuring keyboard settings, the user may be returned to the dialog window. When the user has completed editing or canceling an order for an item, process **1100** may proceed to close the dialog window. At step **1110**, if the user edited or cancelled an order, process **1100** then allows the user to view multiple bids and offers by presenting the user with, for example, bids and offers display screens **500**, **600**, and **700** as shown in FIGS. **5-7**, respectively. Bids and offers display screen **500** may include advanced features such as the "What's Said" column. The information shown in "What's Said" column may be determined by a process **1200**.

[0062] Once a user has accessed a bid and offer display screen **500** or any other suitable trading interface at step **1202**, process **1200** may allow the user to view one or more existing orders (e.g., bids, offers, etc.) This display may include bid price, bid size, offer price, offer size, and an arrow representing the buyers and sellers wish to transact.

[0063] To determine the color and direction associated with each arrow, process **1200** determines at step **1204** whether the bid size for an item is greater than the offer size. If the bid size is greater than the offer size, process **1200** determines at step **1206** whether the last transacted price is equivalent to the price offered by the seller. If the buyer bought the item at the seller's price, process **1200** then displays a green arrow that points in the up direction at step **1208**. Otherwise, if the last transacted price is equivalent to the price offered by the buyer (e.g., bid price), process **1200** then displays a green arrow that points in the down direction at step **1210**.

[0064] If the bid size is not greater than the offer size, process **1200** then determines whether the bid size is less than the offer size at step **1212**. If the bid size is less than the offer size, process **1200** determines at step **714** whether the last transacted price is equivalent to the price offered by the seller. If the buyer bought the item at the seller's price, process **1200** then displays a red arrow that points in the up direction at step **1216**. Otherwise, if the last transacted price is equivalent to the price offered by the buyer (e.g., bid price), process **1200** then displays a red arrow that points in the down direction at step **1218**.

[0065] Process **1200** queries whether a bid or an offer has been placed at all. At step **1220**, process **1200** determines if a bid has been placed. If a bid has not been placed for the item, process **1200** then displays a yellow arrow that points in the up direction at step **1222**. The yellow color may indicate that the buyer has stopped making transactions. Otherwise, process **1200** then queries whether an offer has been placed at step **1224**. If a bid has not been placed for the item, process **1200** then displays a yellow arrow that points in the down direction at step **1226**. The additional information (e.g., arrow color and direction) may be transmitted to the trading interface at step **1228**.

[0066] One example of a system **1300** for implementing the present invention is shown in **FIG. 13**. As illustrated, system **1300** may include one or more computers **1301**, including a mouse **1306** and a keyboard **1307**, that are connected by one or more communication links **1302** to a computer network **1303** that is linked via a communication link **1305** to a trading server **1304**.

[0067] In system **1300**, trading server **1304** may be any suitable server, processor, computer, or data processing device, or combination of the same. Computer network **1303** may be any suitable computer network including the Internet, an Intranet, a wide-area network (WAN), a local-area network (LAN), a wireless network, a digital subscriber line (DSL) network, a frame relay network, an asynchronous transfer mode (ATM) network, a virtual private network (VPN), or any combination of any of the same. Communication links **1302** and **1305** may be any suitable communication links suitable for communicating data between computers **1301** and server **1304**, such as network links, dial-up links, wireless links, hard-wired links, etc. User computers **1301** may be any suitable computers, processors, computer terminals, displays, portable computers, personal digital assistants, or any other suitable data processing devices, or combinations of the same.

[0068] Thus, systems and methods for providing a trading interface with advanced features are provided. Providing a user with advanced features may allow the user to be more efficient and may provide the user with overall flexibility. Persons skilled in the art will appreciate that the present invention can be practiced by other than the described embodiments, which are presented for purposes of illustration and not of limitation, and the present invention is limited only by the claims which follow.

What is claimed is:

1. A method for editing an order in an electronic trading system, wherein the order comprises one of a bid, an offer, a buy, and a sell, the method comprising:

receiving an order command;

submitting the order corresponding to the order command;

receiving a selection of the order;

in response to receipt of the selection of the order, presenting an interactive data display that allows a user to modify the order; and

submitting the order as modified.

2. The method of claim 1, wherein the interactive data display is a dialog window.

3. The method of claim 1, further comprising displaying current bid and offer data.

4. The method of claim 3, wherein the current bid and offer data is displayed in a spread sheet.

5. The method of claim 3, wherein the current bid and offer data is displayed in a data window.

6. The method of claim 3, wherein the current bid and offer data is displayed in a web page.

7. The method of claim 1, wherein receiving a selection is received as a keyboard entry.

8. The method of claim 1, wherein receiving a selection is received as a mouse entry.

9. The method of claim 1, wherein presenting an interactive data display that allows the user to modify the order further comprises presenting an interactive data display that allows the user to cancel the order.

10. The method of claim 1, wherein presenting an interactive data display that allows the user to modify the order further comprises presenting an interactive data display that allows the user to change the price of the selection.

11. The method of claim 1, wherein presenting an interactive data display that allows the user to modify the order further comprises presenting an interactive data display that allows the user to change the size of the selection.

12. The method of claim 1, further comprising:

allowing a user to configure at least one keyboard setting of a plurality of keyboard settings; and

allowing the user to save the at least one keyboard setting of the plurality of keyboard settings.

13. The method of claim 12, further comprising saving a default keyboard setting.

14. The method of claim 13, wherein saving is performed automatically.

15. The method of claim 12, further comprising allowing the user to associate a function with at least one keyboard key.

16. The method of claim 12, further comprising allowing the user to select a keyboard setting.

17. A method for allowing a user to configure a keyboard setting of a plurality of keyboard settings for an electronic trading system, the method comprising:

selecting the keyboard setting of a plurality of keyboard settings;

allowing the user to associate a trading function with at least one keyboard key; and

allowing the user to save the keyboard setting.

18. The method of claim 17, further comprising saving a default keyboard setting.

19. The method of claim 18, wherein saving is performed automatically.

20. The method of claim 17, further comprising providing the user with the capability to view a plurality of keyboard settings

21. A method for determining the desire of a user to transact, comprising:

detecting a submission of a bid from a first user via a first trading interface, wherein the submission comprises a price and a size;

detecting a submission of an offer from a second user via first trading interface, wherein the submission comprises a price and a size;

detecting a transaction between the first user and the second user, wherein the transaction comprises a transaction price;

calculating the information relating to the desire of the user to transact; and

displaying the information in an interactive data display.

22. The method of claim 21, further comprising displaying a green arrow in the display when the size of the bid from the first user is greater than the size of the offer from second user.

23. The method of claim 21, further comprising displaying a red arrow in the display when the size of the offer from the second user is greater than the size of the bid from the firs t user.

24. The method of claim 21, further comprising displaying a down arrow in the display when the transaction price is equivalent to the price of the bid.

25. The method of claim 21, further comprising displaying an up arrow in the display when the transaction price is equivalent to the price of the offer.

26. The method of claim 21, further comprising displaying a yellow arrow in the display when at least one bid and offer is not detected.

27. The method of claim 26, wherein the yellow arrow is an up arrow when at least one bid has not been detected.

28. The method of claim 26, wherein the yellow arrow is a down arrow when at least one offer has not been detected.

29. A system for editing an order in an electronic trading system, wherein the order comprises one of a bid, an offer, a buy, and a sell, comprising:

a user computer configured to:

receive an order command;

submit the order corresponding to the order command; and

receive a selection of the order; and

a trading server configured to:

present an interactive data display that allows a user to modify the order; and

direct the user computer to submit the order as modified.

30. The system of claim 29, wherein the interactive data display is a dialog window.

31. The system of claim 29, wherein the trading server is further configured to display current bid and offer data.

32. The system of claim 31, wherein the current bid and offer data is displayed in a spread sheet.

33. The system of claim 31, wherein the current bid and offer data is displayed in a data window.

34. The system of claim 31, wherein the current bid and offer data is displayed in a web page.

35. The system of claim 29, wherein the user computer is further configured to receive the selection of the order by a keyboard entry.

36. The system of claim 29, wherein the user computer is further configured to receive the selection of the order by mouse entry.

37. The system of claim 29, wherein the trading system is further configured to present an interactive data display that allows the user to cancel the order.

38. The system of claim 29, wherein the trading system is further configured to present an interactive data display that allows the user to change the price of the selection.

39. The system of claim 29, wherein the trading system is further configured to present an interactive data display that allows the user to change the size of the selection.

40. The system of claim 29, wherein the trading system is further configured to:

allow a user to configure at least one keyboard setting of a plurality of keyboard settings; and

allow the user to save the at least one keyboard setting of the plurality of keyboard settings.

41. The system of claim 40, wherein the trading system is further configured to save a default keyboard setting.

42. The system of claim 40, wherein the trading system is further configured to automatically save a default keyboard setting.

43. The system of claim 40, wherein the trading system is further configured to allow the user to associate a function with at least one keyboard key.

44. The system of claim 40, wherein the trading system is further configured to allow the user to select a keyboard setting.

45. A system for allowing a user to configure a keyboard setting of a plurality of keyboard settings for an electronic trading system, comprising:

a user computer configured to receive a selection of the keyboard setting of the plurality of keyboard settings; and

a trading system configured to:

associate a trading function with at least one keyboard key; and

save the keyboard setting.

46. The system of claim 45, wherein the trading system is further configured to save a default keyboard setting.

47. The system of claim 45, wherein the trading system is further configured to automatically save a default keyboard setting.

48. The system of claim 45, wherein the trading system is further configured to provide the user with the capability to view a plurality of keyboard settings.

49. A system for determining the desire of a user to transact, comprising:

a trading system configured to:

detect submission of a bid from a first user via a first trading interface, wherein the submission comprises a price and a size;

detect a submission of an offer from a second user via first trading interface, wherein the submission comprises a price and a size;

detect a transaction between the first user and the second user, wherein the transaction comprises a transaction price;

calculate the information relating to the desire of the user to transact; and

display the information in an interactive data display.

50. The system of claim 49, wherein the trading system is further configured to display a green arrow in the display when the size of the bid from the first user is greater than the size of the offer from second user.

51. The system of claim 49, wherein the trading system is further configured to display a red arrow in the display when the size of the offer from the second user is greater than the size of the bid from the first user.

52. The system of claim 49, wherein the trading system is further configured to display a down arrow in the display when the transaction price is equivalent to the price of the bid.

53. The system of claim 49, wherein the trading system is further configured to display an up arrow in the display when the transaction price is equivalent to the price of the offer.

54. The system of claim 49, wherein the trading system is further configured to display a yellow arrow in the display when at least one bid and offer is not detected.

55. The system of claim 49, wherein the trading system is further configured to display a yellow and up arrow when at least one bid has not been detected.

56. The system of claim 49, wherein the trading system is further configured to display a yellow and down arrow when at least one offer has not been detected.

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