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(54) SYSTEMS AND METHODS FOR ESTABLISHING FIRST ON THE FOLLOW TRADING PRIORITY IN ELECTRONIC TRADING SYSTEMS

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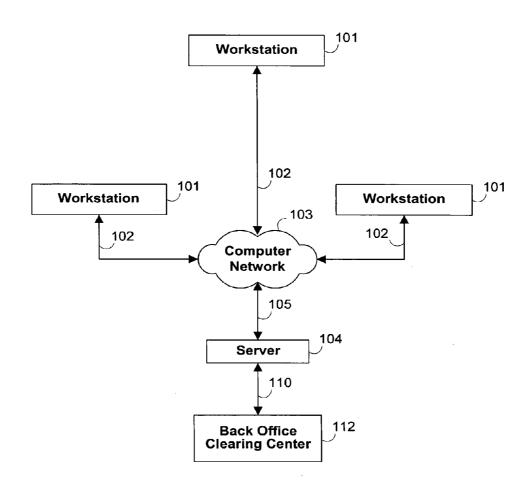
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(57) ABSTRACT

Systems and methods for trading an item in an electronic trading system are provided. The method preferably includes transitioning the trading system from a first trading state to a second trading state. Once the trading system has transitioned to the second state, the method includes determining whether an existing order qualifies for trading priority and/or exclusivity in the second trading state with respect to an incoming contra order. This determining of trading rights in the second trading state is preferably based on the status of trading priority in the first trading state and also a set of predetermined criteria with respect to an incoming contra order in the second trading state. If the existing order qualifies for trading priority, then the system preferably presents the incoming contra order for trading exclusively or semi-exclusively to the participant associated with the existing order.

100





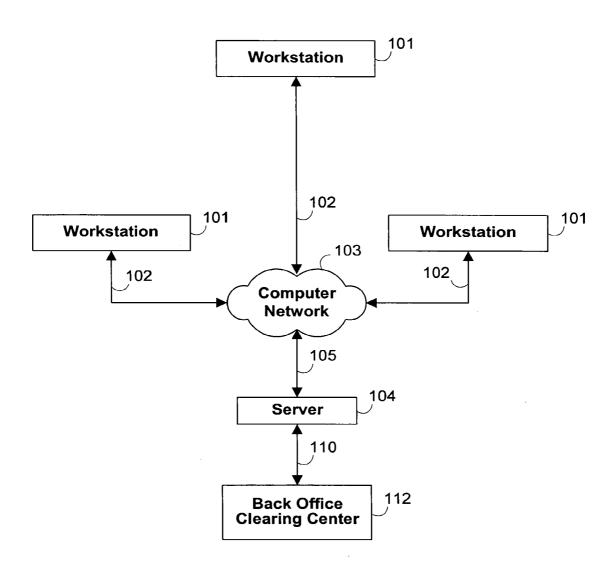


FIG. 1

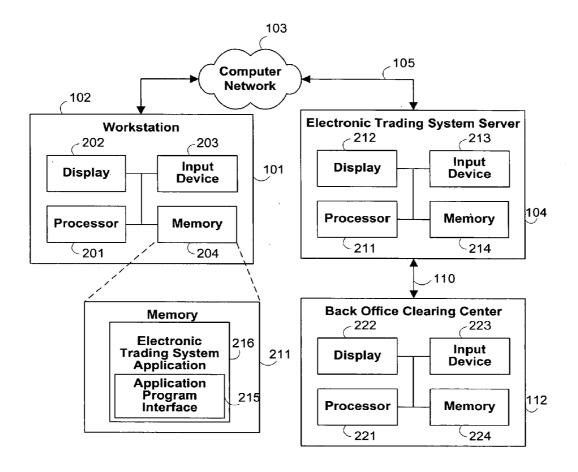


FIG. 2

300

ITEM	MARKET	LAST PRICE
302 _{>} BOND A	*100.21 - 100.22 127 x 60 306 301	100.20 (₃₀₈
	100.20 - 100.23 30 x 30	

FIG. 3

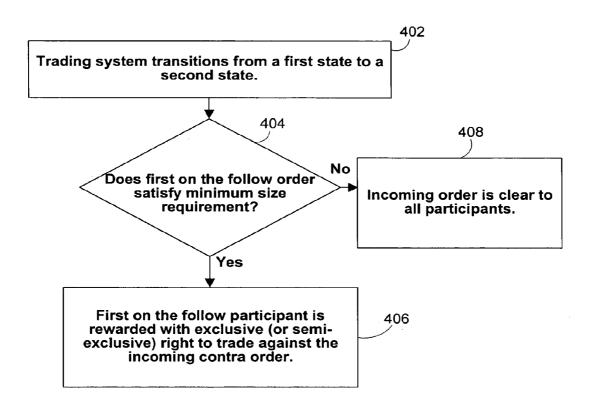


FIG. 4

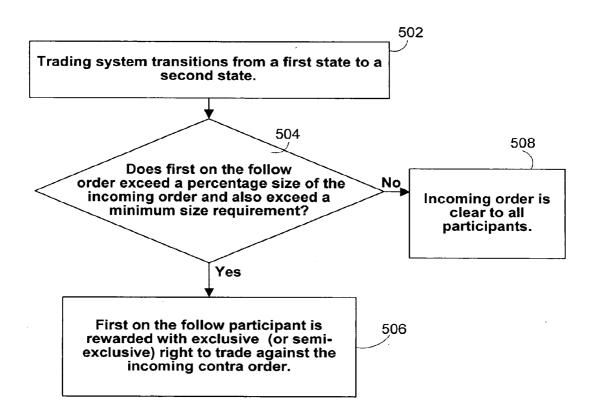


FIG. 5

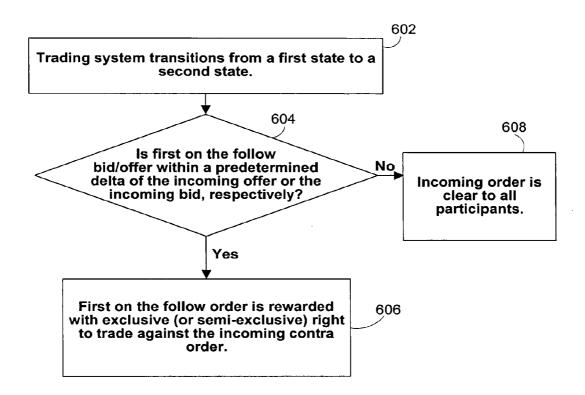


FIG. 6

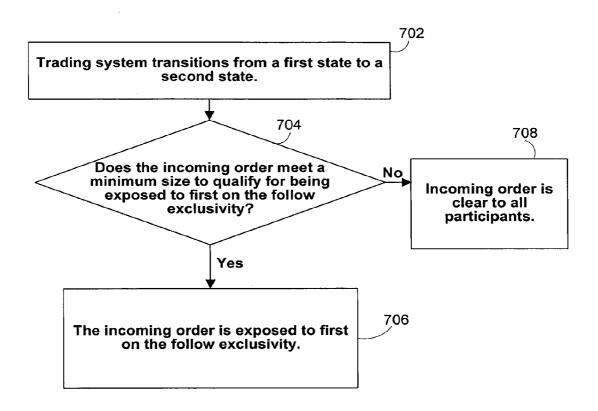


FIG. 7

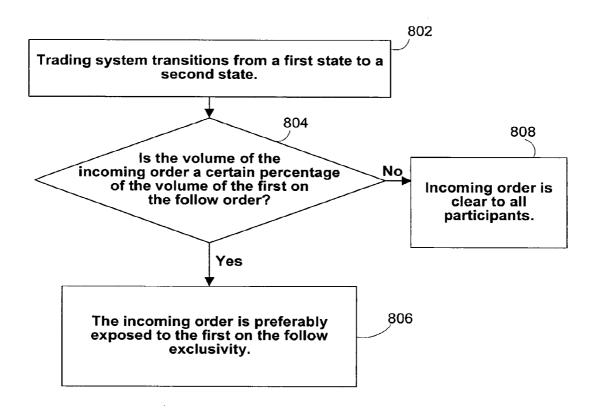


FIG. 8

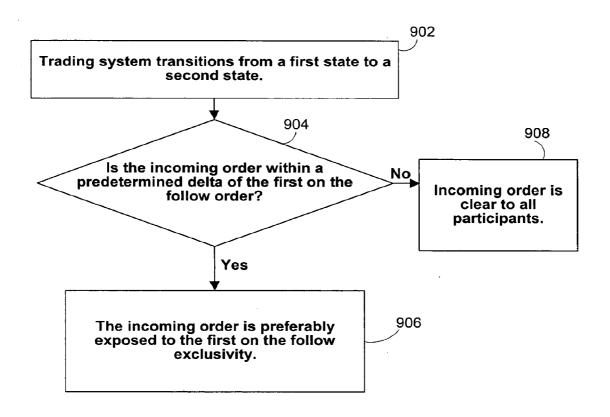


FIG. 9

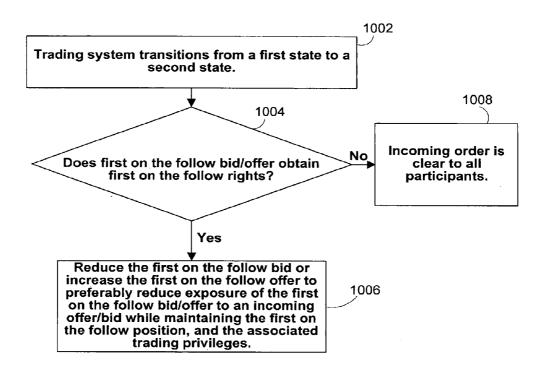


FIG. 10

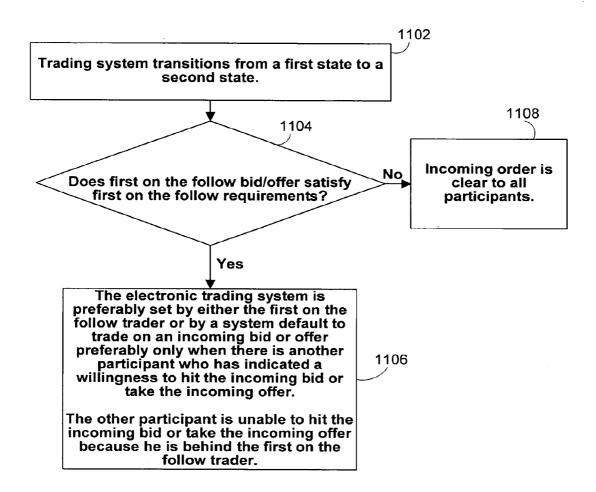


FIG. 11

SYSTEMS AND METHODS FOR ESTABLISHING FIRST ON THE FOLLOW TRADING PRIORITY IN ELECTRONIC TRADING SYSTEMS

[0001] The present invention relates to electronic systems and methods for obtaining trading exclusivity and/or trading priority in electronic trading systems.

BACKGROUND OF THE INVENTION

[0002] In electronic trading systems that include bids and offers for items, a bid or offer that is entered by a participant may typically be entered as available (referred to alternatively hereinafter as "clear") to trade to other participants. Nevertheless, certain known trading systems may restrict the availability to certain participant(s) under certain conditions. For example, a Bid/Offer may be available only to the current market participants, i.e., those with current commitments (bids/offers). Accordingly, preferably only those customers with current participation can hit or lift these incoming entries. Such bids/offers may be considered unclear—i.e., not available to all trading participants.

[0003] In one type of trading system, the uncleared bids become available to participants other than the current participants only after a preset or predetermined time interval has expired (tracked by a internal system clock or other suitable device).

[0004] One criteria that may affect order priority—e.g., the exclusive right of certain participants to trade on incoming orders—is the respective priority of participants following the transition from a first trading state to a second trading state. For the purposes of this application, a trading state is defined as a set of rules or conditions that govern the interaction between trading participants.

[0005] It would be desirable to provide systems and methods that further define the rules or conditions that govern the interaction between trading participants when the system transitions from one trading state to a second trading state.

SUMMARY OF THE INVENTION

[0006] It would be desirable to provide systems and methods that further define the rules or conditions that govern the interaction between trading participants when the system transitions from one trading state to a second trading state.

[0007] Systems and methods for trading an item in an electronic trading system are provided. A method according to the invention preferably includes transitioning the trading system from a first trading state to a second trading state. Once the trading system has transitioned to the second state, the method includes determining whether an existing order qualifies for trading rights-i.e., trading priority and/or exclusivity—in the second trading state. This determining of trading rights in the second trading state is preferably based on the status of trading rights in the first trading state and also a set of predetermined criteria with respect to an incoming contra order—i.e., an order on the other side of a trade or active market (e.g., a bid is contra to an offer or other instruction to sell, an offer is contra to a bid or instruction to buy)—in the second trading state. If the existing order qualifies for trading rights, then the system preferably presents the incoming contra order for trading exclusively or semi-exclusively to the participant associated with the existing order.

BRIEF DESCRIPTION OF THE DRAWINGS

[0008] Further features of the invention, its nature and various advantages will be apparent from the following detailed description of the preferred embodiments, taken in conjunction with the accompanying drawings, in which like reference characters refer to like parts throughout, and in which:

[0009] FIG. 1 is an illustration of an electronic implementation of a system in accordance with some embodiments of the present invention;

[0010] FIG. 2 is an illustration, in greater detail, of an electronic implementation of a system in accordance with some embodiments of the present invention;

[0011] FIG. 3 is an illustration of an electronic trading interface in accordance with some embodiments of the present invention; and

[0012] FIGS. 4-11 are flowcharts of various methods according to the invention.

DETAILED DESCRIPTION OF THE INVENTION

[0013] In one aspect of the invention, trading rules according to the invention disclosed herein relate to being "first-onthe-follow". These first-on-the-follow rules relate to the respective priority of participants following the transition from a first trading state to a second trading state (for the purposes of this application, a trading state is defined as a set of rules or conditions that govern the interaction between trading participants—transition from one trading state to a second trading state signifies transitioning from one set of rules or conditions to a second set of rules or conditions). First-on-the-follow rules relate in large part to identifying the participant that will have the right to trade exclusively (semiexclusively)—i.e., the exclusive bidder on incoming offers and the exclusive offeror on incoming bids—at the commencement of the new state. It should be noted that in some embodiment of the invention, the first on the follow participant may be granted exclusive or semi-exclusive rights, depending on the rules of the trading system. Any references herein, or in the figures, to exclusive rights should be understood to refer to either an exclusive or semi-exclusive set of rights.

[0014] Typically, first-on-the-follow priority rights are obtained by the participants identified as the best bidder and the best offeror (the term best being defined as highest bidder/buyer with respect to price/time priority and lowest offeror/seller with respect to price/time priority) at the conclusion of the first trade state. In first-on-the-follow rules according to the invention, participants that were previously identified as the best bidder and best offeror at the conclusion of the first trade state may only obtain the first-on-the-follow rights in the second trade state if the best bidder and the best offeror satisfy either a certain minimum order size requirement, are within a certain predetermined delta (as described in more detail below) of the best bidder and the best offeror, respectively, or satisfy a combination of the minimum order size requirement and the predetermined delta restriction.

[0015] Alternatively, an additional restriction with respect to obtaining first-on-the-follow rights may relate to the amount purchased or sold during the first trade state by the prospective first-on-the-follow participant. It should be noted that first-on-the-follow rights may obtain a particular advantage for the participant at least because these rights, in some embodiments of the invention, may entitle the participants to

priority with respect to any incoming orders at the commencement of the second trading state.

[0016] With respect to hidden size, as described below, a participant's hidden size may be considered in satisfying the participant's minimum size requirement for obtaining first-on-the-follow rights.

[0017] In yet another rule according to the invention, if a participant satisfies first-on-the-follow requirements, then the participant may have a preset instruction to the system to either reduce his bid by a predetermined increment or increase his offer by an increment in the second trading state. Preferably, the respective increase or decrease reduces his exposure to an incoming order while maintaining his first-on-the-follow position, and the trading privileges, such as, for example, the exclusive right to trade against incoming orders, associated therewith. Alternatively, exposure may be reduced by reducing the size of the first on the follow order.

[0018] In an alternative embodiment, the order that is first on the follow should preferably be within a predetermined delta of the best contra order, or the incoming order should preferably satisfy some combination of the threshold size and the predetermined delta in order to only be shown to or, alternatively, to only be available to be traded by, select participants that are first on the follow.

[0019] With respect to yet another embodiment of the invention, hidden size—i.e., a portion of the order that is not shown to the rest of the participants, but, if acted upon, is tradable—may also count toward satisfying the minimum size requirement of the order either as the first on the follow order or the current order in the system.

[0020] Yet another aspect of the invention provides rules associated with a method that restricts all incoming orders to a select number of traders. For example, the exclusive bidder or offeror preferably has an option to exclusively trade on an incoming order, although another participant is behind the exclusive bidder or offeror and has the ability to indicate a willingness to hit the incoming bid or lift the incoming offer if the exclusive bidder or offeror refuses to act on the incoming order. In one rule according to the invention, the exclusive bidder or offeror may preferably set, or have set, his respective default position to trade on an incoming bid or offer when there is another participant who has indicated a willingness to hit the incoming bid or lift the incoming offer. Thus, the default position becomes a "take when (another party has indicated that he is willing . . .) take" or "hit when (another party has indicated that he is willing . . .) hit."

[0021] This rule may preferably be implemented in at least a state where bids and offers are posted—i.e., a bid/offer state—as well as a state wherein trades actually occur and bids and offers are matched.

[0022] It should be noted that the default position described herein for the take-when-take or hit-when-hit order may preferably be further restricted to only act when the incoming order is a predetermined delta, as described in more detail above, from the headline price (see element 304 in FIG. 3) in bid/offer state, or the trading price in the state in which matches occur.

[0023] Referring to FIG. 1, exemplary system 100 for implementing the present invention is shown. As illustrated, system 100 may include one or more workstations 101. Workstations 101 may be local or remote, and are connected by one or more communications links 102 to computer network 103

that is linked via communications links 105 to server 104. Server 104 is linked via communications link 110 to back office clearing center 112.

[0024] In system 100, server 104 may be any suitable server, processor, computer, or data processing device, or combination of the same. Server 104 and back office clearing center 112 may form part of the electronic trading system. Furthermore, server 104 may also contain an electronic trading system and application programming interface and merely transmit a Graphical User Interface or other display screens to the user at the user workstation, or the Graphical User Interface may reside on Workstation 101.

[0025] Computer network 103 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. Communications links 102 and 105 may be any communications links suitable for communicating data between workstations 101 and server 104, such as network links, dial-up links, wireless links, hard-wired links, etc.

[0026] Workstations 101 may be personal computers, laptop computers, mainframe computers, dumb terminals, data displays, Internet browsers, Personal Digital Assistants (PDAs), two-way pagers, wireless terminals, portable telephones, programmed computers having memory, the programmed computer using the memory for implementing trading models, etc., or any combination of the same. Workstations 102 may be used to implement the electronic trading system application and application programming interface according to the invention.

[0027] Back office clearing center 112 may be any suitable equipment, such as a computer, a laptop computer, a mainframe computer, etc., or any combination of the same, for causing transactions to be cleared through a clearinghouse and/or verifying that transactions are cleared through a clearinghouse. (This clearing is not to be confused with being clear to trade, which is defined in more detail above.) Communications link 110 may be any communications links suitable for communicating data between server 104 and back office clearing center 112, such as network links, dial-up links, wireless links, hard-wired links, etc.

[0028] The server, the back office clearing center, and one of the workstations, which are depicted in FIG. 1, are illustrated in more detail in FIG. 2. Referring to FIG. 2, workstation 101 may include processor 201, display 202, input device 203, and memory 204, which may be interconnected. In a preferred embodiment, memory 204 contains a storage device for storing a workstation program for controlling processor 201. The storage device may include software stored on a suitable storage medium such as a disk. Memory 204 also preferably contains an electronic trading system application 216 according to the invention.

[0029] Electronic trading system application 216 may preferably include application program interface 215, or alternatively, as described above, electronic trading system application 216 may be resident in the memory of server 104. In this embodiment, the electronic trading system may contain application program interface 215 as a discrete application from the electronic trading system application which also may be included therein. The only distribution to the user may

then be a Graphical User Interface which allows the user to interact with electronic trading system application 216 resident at server 104.

[0030] Processor 201 uses the workstation program to present on display 202 electronic trading system application information relating to market conditions received through communication link 102 and trading commands and values transmitted by a user of workstation 101. Furthermore, input device 203 may be used to manually enter commands and values in order for these commands and values to be communicated to the electronic trading system.

[0031] FIG. 3 shows an illustrative trading interface 300. Interface 300 is preferably for interactive trading and is adapted for implementing systems and methods according to the present invention. The interface includes a top line 301 (alternatively referred to herein as the touch line, or the headline.) Top line 301 may preferably be adapted to include the price that should be initially aggressed to start a trade or, alternatively, top line 301 may show the status of the actual aggressed trade. In either case, top line 301 is typically located at the top of the quad (quad being defined for purposes of this application as the display area related to trading of a particular instrument.) Top line 301 may include item 302, price 304, size 306 and last price 308. Interface 300 also includes market depth information 310, which shows price and size for items that have not yet been traded (commonly referred to as the order book, or, simply, the book). Also shown in interface 300 are bid and offer stacks 312 and 314, respectively. Bid and offer stacks 312 and 314 may indicate the size of one or many market participants that are bidding or offering at the current price 304. Note that price 304 in this exemplary example is shown in a traditional United States Government Bond pricing format.

[0032] Typically, an incoming order that is not clear to trade is indicated by a visual indicator—e.g., an asterisk preferably adjacent to the price associated with the new order (See, asterisk adjacent to price 304 in FIG. 3). In the embodiment shown in FIG. 3, in the particular circumstance where only a portion of an order is not cleared to trade, a visual indicator may be displayed in bid and offer stacks 312 and 314 adjacent the volume of the partially cleared order to indicate that only a portion of the order is cleared to be traded, or in some other suitable location which differentiates the partially cleared order from the totally uncleared order or from the totally clear order.

[0033] FIG. 4 is a flow chart that describes one embodiment of a method according to the invention. Step 402 shows that the trading system transitions from a first state to a second state. The interface in FIG. 3 may show a trading state such as a bid/offer state in which participants enter their respective bids and offers. Other states may include a trading state wherein certain of the participants may engage in trading and subsequent negotiations associated therewith. These and other exemplary states are described in detail in U.S. Pat. No. 6,560,580 which is hereby incorporated by reference in its entirety. Following the conclusion of activity or other termination of the trading state that allows trading and negotiation between participants, the system may transition to a bid/offer state or to some other suitable trading state. As such, the trader with first on the follow priority may enjoy exclusive trading rights to trade on incoming contra orders when the system transitions a trading state to bid/offer state.

[0034] Step 404 queries whether a first on the follow order in the system satisfies a minimum size requirement. Step 406

shows that, if the first on the follow order satisfies the minimum size requirement, then the participant associated with the first on the follow order is rewarded with exclusive rights to trade against the incoming contra order (assuming, in certain embodiments, that the incoming order has price/time priority over other current orders and that the incoming order also satisfies the minimum size requirement, see FIGS. 7-9, and the corresponding text).

[0035] It should be noted that each of FIGS. 4-9 share similar steps X02, X06, and X08. The FIGs. are differentiated, for the most part, based on the query step of X04 in which each flow chart describes a unique query.

[0036] FIG. 5 is a flow chart describing another embodiment of a method according to the invention. Query step 504 queries whether a first on the follow order exceeds a percentage size of the incoming order and also exceeds a minimum size requirement. If the first on the follow order does satisfy the query, then the first on the follow participant associated with the first on the follow order may, under certain circumstances, be awarded an exclusive or semi-exclusive right to trade with the incoming order.

[0037] FIG. 6 is a flow chart describing yet another embodiment of a method according to the invention. Query step 604 queries whether any first on the follow order is within a predetermined delta, as described in more detail above, of the incoming bid or the incoming offer. If the first on the follow order is within the predetermined delta, then the first on the follow participant associated with the first on the follow order may, under certain circumstances, be awarded an exclusive or semi-exclusive right to trade with the incoming order.

[0038] FIG. 7 is a flow chart describing still another embodiment of a method according to the invention. Step 704 queries whether an incoming order meets a minimum size to qualify for being clear only to a first on the follow participant or group of participants. If the incoming order meets the minimum size, then the incoming order may be clear to the first on the follow participant or group of participants.

[0039] FIG. 8 is a flow chart describing yet another embodiment of a method according to the invention. Step 804 queries whether an incoming order includes a volume that is a certain, preferably predetermined, percentage (or other suitable metric) of the volume of the first on the follow contra order, then the incoming order may be clear to the first on the follow participant or group of participants. If the incoming order is a certain percentage of the first on the follow contra order, then the incoming order may be clear to the first on the follow participant or group of participants.

[0040] FIG. 9 is a flow chart describing another embodiment of a method according to the invention. Step 904 queries whether an incoming order is within a predetermined delta of the first on the follow order. If the incoming order is within a predetermined delta of the first on the follow contra order, then the incoming order may be clear to the first on the follow participant or group of participants.

[0041] It should be noted that each of the different query steps in FIGS. 4-9 may be used simultaneously with one another to provide multiple queries that are combined to determine whether any first on the follow order or, alternatively, any incoming order, is rewarded with exclusivity. Thus, the trading system may query numerous different queries before a current participant associated with a current order is awarded exclusive or semi-exclusive rights to trade with an incoming order.

[0042] FIG. 10 shows a flow chart that includes step 1004 that queries whether first on the follow rights have been obtained. If first on the follow rights have been obtained by a participant, then step 1006 teaches that either a pre-set system default, or a participant-set feature, may reduce the first on the follow bid or increase the first on the follow offer to preferably reduce exposure to any incoming offer/bid, while maintaining the first on the follow position, and the associated trading privileges. Exposure may also be reduced by decreasing the size of the first on the follow bid or offer. This reduction may be implemented independently or together with a price adjustment as described above.

[0043] FIG. 11 shows a flow chart of yet another feature of the present invention. In this feature, step 1104 queries whether first on the follow rights have been obtained by satisfying certain criteria. If first on the follow rights have been obtained, then step 1106 teaches that the electronic trading system is preferably set by either the first on the follow trader or by a system default to trade on an incoming bid or offer preferably only when there is another participant who has indicated a willingness to hit the incoming bid or take the incoming offer. The other participant is preferably unable to hit the incoming bid or take the incoming offer because he is behind, with respect to trading priority, the first on the follow trader.

[0044] It should be noted that this particular feature is not limited to first on the follow but, in fact, extends to any suitable trading situation. Thus, any bid or offer could be placed whereby the bid is only active if another bid, having inferior trading rights because, for example, the inferior bid was later in time, is at the same price and has indicated a willingness to trade.

[0045] Thus, systems and method for defining criteria for obtaining exclusive priority in electronic trading systems have been provided. It will be understood that the foregoing is only illustrative of the principles of the invention, and that various modifications can be made by those skilled in the art without departing from the scope and spirit of the invention.

1. A method for trading an item in an electronic trading system comprising at least one computing device, the method comprising:

transitioning, by the at least one computing device, the trading system from a first trading state to a second trading state, wherein the first trading state comprises an active trading state during which a plurality of participants at least one of negotiate and trade the item therein, and wherein the second trading state comprises a bid/offer state during which participants enter their respective bids and offers;

determining, by the at least one computing device, whether an existing order having first on the follow priority status at a conclusion of the first state qualifies for trading priority in the second trading state with respect to an incoming contra order received after the existing order, the incoming contra order received from at least one workstation coupled to the at least one computing device, the qualifying of trading priority of the existing order in the second trading state being based on the first one follow priority status of the existing order at the conclusion of the first trading state and being based on a set of predetermined criteria in the second trading state;

presenting, by the at least one computing device, the incoming contra order for trading exclusively or semi exclusively to a participant associated with the existing

- order based on the existing order qualifying for trading priority in the second trading state with respect to the incoming contra order.
- 2. The method for trading an item according to claim 1 wherein the qualifying of trading priority of the existing order in the second trading state comprises querying whether the existing order satisfies a minimum size requirement.
- 3. The method for trading an item according to claim 1 wherein the determining comprises querying whether the size of the existing order exceeds a percentage of the size of the incoming contra order and wherein the existing order is further qualified based on the size of the existing order exceeding the percentage of the size of the incoming order.
- **4**. The method for trading an item according to claim **1** wherein the determining comprises querying whether the existing order is within a predetermined delta of the incoming contra order and wherein the existing order is further qualified based on the size of the existing order being within the predetermined delta.
- 5. The method for trading an item according to claim 1 wherein the determining comprises querying whether the incoming contra order satisfies a minimum size requirement and wherein the existing order is further qualified based on the size of the incoming order exceeding the minimum size requirement.
- 6. The method for trading an item according to claim 1 wherein the determining comprises querying whether the size of the incoming contra order exceeds a percentage of the size of the existing order and wherein the existing order is further qualified based on the size of the incoming order exceeding the percentage of the size of the existing order.
- 7. The method for trading an item according to claim 1 wherein the determining comprises querying whether the incoming contra order is within a predetermined delta of the existing order and wherein the existing order is further qualified based on the size of the incoming order being within the predetermined delta.
- **8**. A computer system for trading an item in an electronic trading system, the computer system comprising:
 - at least one computing device;
 - at least one memory having instructions stored thereon which, when executed by the at least one computing device, direct the at least one processor to perform a method comprising:

transitioning the trading system from a first trading state to a second trading state, wherein the first trading state comprises an active trading state during which a plurality of participants at least one of negotiate and trade the item therein, and wherein the second trading state comprises a bid/offer state during which participants enter their respective bids and offers;

determining that an existing order having first on the follow priority status at the conclusion of the first trading state qualifies for trading priority in the second trading state with respect to an incoming contra order based on the first on the follow priority status of the existing order at the conclusion of the first trading state and based on the existing order satisfying a set of predetermined criteria, the incoming order received after the existing order from at least one workstation coupled to the at least one computing device; and

presenting the incoming order for trading exclusively to a participant associated with the existing order based on the existing order qualifying for trading priority in the second trading state with respect to the incoming contra order.

9-22. (canceled)

23. A method for trading an item in an electronic trading system, the method comprising:

identifying, by at least one computing device, a current order:

receiving, by the at least one computing device an incoming contra order;

determining, by the at least one computing device, whether the current order possesses exclusive privileges to be traded with the incoming contra order, in which the act of determining whether the current order possesses exclusive trading privileges to be traded with the incoming contra order comprises determining that the current order does possess exclusive trading privileges to be traded with the incoming contra order;

determining that a second order exists in the system and includes an indication to trade with the incoming contra order if the current order declines to trade with the incoming contra order; and

based on the act of determining that the current order does possess exclusive trading privileges to be traded with the incoming contra order and the act of determining that a second order exists in the system and includes an indication to trade with the incoming contra order if the current order declines to trade with the incoming contra order, executing, by the at least one processor, a trade between the incoming contra order and the current order.

- 24. The method of claim 1, wherein the participant associated with the existing order traded the item with exclusivity during at least a portion of the first trading state and wherein the existing order is further qualified based on determining that the participant traded with exclusivity during at least a portion of the first trading state.
 - 25. The method of claim 1, further comprising:

determining by the at least one computing device that a price of the received contra order is within a predetermined delta of a price of the best order; and

wherein determining that the participant has the right to trade exclusively against the received contra order comprises determining that the participant has the right to trade exclusively against the received contra order based at least in part on determining that the price of the received contra order is within the predetermined delta of the price of the best order.

26. The method of claim 1,

wherein the orders pending at the conclusion of the first trading state comprise bids pending at the conclusion of the first trading state; and

wherein the existing order comprises a best bid having a best price from among the pending bids; and

wherein the received contra order comprises an offer.

27. The method of claim 1, further comprising:

based at least in part on the act of presenting, automatically modifying by the at least one computing device the existing order, wherein modifying the existing order does not affect the potential trading priority of the existing order.

28. The method of claim 27, wherein modifying the existing order comprises at least one of:

modifying a size of the existing order and modifying a price of the existing order.

29. The method of claim 27,

wherein the existing order comprises a bid; and

wherein modifying the existing order comprises at least one of reducing a size of the bid and reducing a price of the bid.

30. The method of claim **27**, wherein the at least one computing device automatically modifies the best order based at least in part on instructions preset by the participant.

- 31. The method of claim 27, wherein the at least one computing device automatically modifies the best order based at least in part on a preset default of the at least one computing device.
 - 32. The method of claim 1.

wherein the existing order comprises (i) a hidden size not shown to other participants and (ii) a displayed size shown to other participants; and

wherein the hidden size and the displayed size are considered in determining that the size of the best order satisfies the minimum size requirement.

33. The method of claim 1.

wherein the best order comprises (i) a hidden size not shown to other participants and (ii) a displayed size shown to other participants; and

wherein only the displayed is considered in determining that the size of the best order satisfies the minimum size requirement.

34. The method of claim **1**, wherein the at least one computing device automatically executes the trade against the received contra order based at least in part on instructions preset by the participant.

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