PATENT CLAIMS

1. A computerised stock exchange trading system comprising:
   - a trading platform and
   - a plurality of trader data processing devices;
   - wherein each trader data processing device is capable of submitting orders in the form of electronic messages, to the trading platform, and the trading platform is capable of processing these orders, by way them being stored in an order book, or, given a matching order already stored in the order book, by way of them at least partly being carried out;
   - wherein each trader data processing device comprises a time generator and is configured to provide each order with a timestamp which represents the point in time of the submission of the order;
   - and wherein the trading system is configured such that incoming orders are processed by the trading platform strictly in a sequence corresponding to the timestamp,

   wherein each trader data processing device is configured to monitor the number of unacknowledged messages submitted to the trading platform and is configured such that a predefined maximal number of such unacknowledged electronic messages is not exceeded at any time.

2. A trading system according to claim 1, wherein at least one trader data processing device comprises a network card, via which the trader data processing device is connected to the trading platform, and wherein the time generator is integrated into the network card.

3. A trading system according to claim 1 or 2, wherein the time generators of all trader data processing devices are identical.

4. A trading system according to one of the preceding claims, wherein the time generators of the trader data processing devices run via a network cycle defined by the trading platform.

5. A trading system according to one of the preceding claims, wherein the time generators are continuously repeatedly synchronisable during operation, by way of the trading platform or a trustworthy external source.

6. A trading system according to one of the preceding claims, comprising at least one switch, wherein the switch is connected to several of the trader data processing devices,

comprises a buffer and is configured to store the orders produced by the trader data processing devices, in the buffer and to transfer then in a manner sorted according to the timestamp, so that the order with the oldest time is transferred first of all.

7. A trading system according to claim 6, wherein the switch waits for a certain time before transfer of an order, in order to compensate possible running time differences of different orders.

8. A trading system according to claim 6 or 7, comprising several levels of switches which are linked to one another in a tree-like manner, wherein each switch comprises a buffer and is configured to store orders in the buffer and to transfer them in a manner sorted according to the timestamp.

9. A trading system according to one of the preceding claims, comprising a second trading platform which is capable of processing orders by way of them being stored in a second order book or, given a matching order already stored in the second order book, by way of them at least partly being carried out, wherein the trading system is configured such that all orders in the trading platform and in the second trading platform are processed independently of one another.

10. A trading system according to one of the preceding claims, wherein the trading platform or each trading platform comprises a prioritiser which carries out a sorting according to the timestamp and/or suppresses identical messages arriving in multiple.

11. A trading system according to claim 1, wherein a sorting according to the sequence corresponding to the timestamp is carried out in a unit with a buffer, and wherein the size of the buffer is selected such that it can accommodate the maximum number of orders.

12. A trading system according to claim 1 or 11, wherein the trading platform is structured in a tree-like manner with network nodes, and wherein sufficient buffer memory is present in each network node, in order to intermediately store all unanswered messages of the traders data processing devices assigned to the network node.

13. A trading system according to one of the preceding claims, additionally comprising a second trading platform, wherein each trader data processing device is connected to the first as well as to the second trading platform, so that each order gets to the first as well as to the second trading platform, wherein the first trading platform is capable of storing these orders in a first order book or, given a matching order already stored in the first

order book, of at least partly carrying them out, wherein the second trading platform is capable of storing these orders in a second order book or, given a matching order already stored in the second order book, of at least partly carrying them out, and wherein the system is configured such that orders going into the first trading platform as well as into the second trading platform are processed strictly in a sequence corresponding to the timestamp, so that the first order book and the second order book, with regard to the contents are equal at all times.

14. A method for operating a trading system for stock exchange trading, in particular according to one of the preceding claims, wherein an order is generated by a trader data processing device, is sent to a trading platform and is processed by this, by way of it being stored in an order book or, given a matching order already stored in the order book, by way of it being at least partly carried out, characterised in that the order is provided by the trader data processing device with a timestamp containing real-time information and that orders going into the trading platform are worked off in a manner sorted according to the timestamp
wherein each trader data processing device monitors the number of messages submitted to the trading platform and is configured such that a predefined maximal number of such unacknowledged electronic messages is not exceeded at any time.

15. A computerised stock exchange trading system comprising
- a trading platform; and
- a plurality of trader data processing devices;
- wherein each trader data processing device is capable of submitting orders in the form of electronic messages, to the trading platform, and the trading platform is capable of processing these orders, by way of them being stored in an order book, or, given a matching order already stored in the order book, by way of them being at least partly carried out;
- wherein each trader data processing device is configured to monitor the number of unacknowledged messages submitted to the trading platform and is configured such that a predefined maximal number of such unacknowledged electronic messages is not exceeded at any time.

16. A trading system according to claim 15, wherein the trading platform comprises a switch with at least one buffer, and wherein the size of the buffer or buffers is selected such that the switch can store at least the maximal number of orders.

17. A method for operating a trading platform, in particular according to claim 15 or 16, wherein a plurality of orders is generated by a trader data processing device, is sent to a

trading platform and is processed by this, by way of the said plurality of orders being stored in an order book or, given a matching order already stored in the order book, by way of at least partly carrying it out, characterised in that a predefined credit balance is given to the

trader data processing device, that a credit is deducted on sending each order and is credited again on receiving an acknowledgement of receipt of the order, and that the trader data processing device cannot send orders as long as the credit balance is used up.

18. A trading system, for example according to one of the claims 1 to 13, 15 or 16, comprising

- a first trading platform, a second trading platform; and
- a plurality of trader data processing devices;
- wherein each trader data processing device is capable of generating orders in the form of electronic messages and sending them;
- wherein each trader data processing device is connected to the first as well as second trading platform, so that each order gets to the first as well as to the second trading platform;
- wherein the first trading platform is capable of storing these orders in a first order book or, given a matching order already stored in the first order book, of at least partly carrying them out;
- wherein the second trading platform is capable of storing these orders in a second order book or, given a matching order already stored in the second order book, of at least partly carrying them out;
- and wherein the system is configured such that the first trading platform as well as the second trading platform processes incoming orders according to defined rules which are identical for the first and the second trading platform, so that the first order book and the second order book are identical with regard to contents, at all times.

19. A trading system according to claim 18, wherein the first and the second trading platform in each case comprise a prioritiser which suppresses the messages which are identical to an already arrived message.

20. A trading system according to one of the claims 1-13 or 16-19, wherein a condition of the system can be represented by a number of data elements, and wherein the trading system is configured to send condition data in each case representing the current condition of the data element, in packets, in a continuous manner during operation and intermittently with the sending of messages, to at least all trader data processing devices, at least until a data packet has been sent for each data element.

21. A trading system according to claim 20, wherein the sending of the condition data is continued in a continuously running manner, by way of the sending of condition data for

each data element beginning from afresh in each case after the sending of a data packet for each data element.

22. A trading system according to claim 20 or 21, wherein each trader data processing device is configured to process a message concerning a data element, when condition data for this data element is present, and to reject this message when no condition data for this data element is present.

23. A trading system according to one of the claims 1-13, 15, 16 or 18-21 comprising several levels of switches, wherein each trader data processing device is connected to the trading platform data processing device via an identical number of switches.

24. A method, in order to synchronise a unit of a stock exchange trading system, in particular according to one of the claims 1-13, 15, 16 or 18-22, with other units of the system, wherein condition data is sent in packets to all units in a continuous manner during operation of the stock exchange trading system, wherein each packet contains a part of the condition data, wherein the sending of the condition data is carried out intermittently with the sending of current messages, until all data elements are distributed, whereupon condition data is sent anew.

25. A method according to claim 24, wherein a unit to be synchronised processes a current message when it relates to a data element for which it has already received condition data, and ignores this message when it relates to a data element for which it has still not received condition data.

26. A computer program which can be loaded onto a data processing device or a system of data processing devices and which on implementation permits the data processing device or the system of data processing devices to carry out a method according to one of the claims 14, 17, 24 or 25.

27. A data carrier, comprising a computer program according to claim 26.