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(54) **REAL-TIME INTERACTIVE WAGERING ON EVENT OUTCOMES**

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(60) Provisional application No. 60/201,038, filed on May 1, 2000.

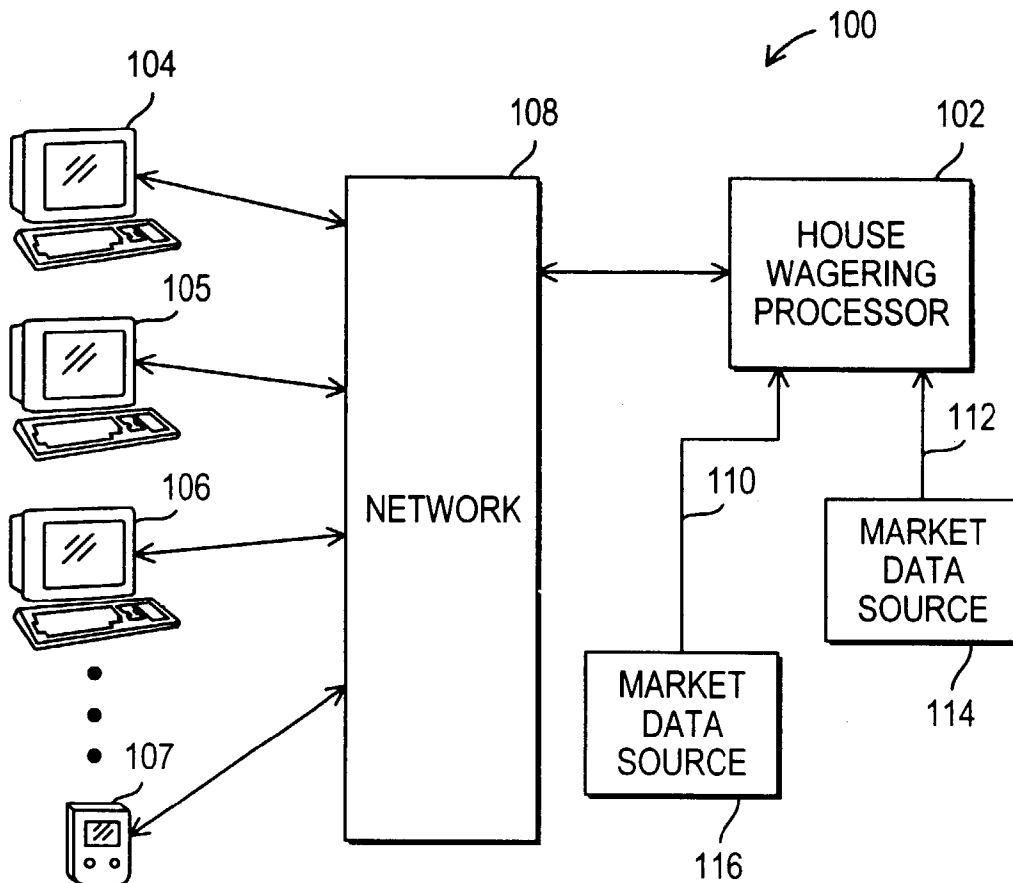
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(57) **ABSTRACT**

Systems and methods for real-time interactive wagering on event outcomes are presented. Clients are first qualified and given wagering limits before being allowed to interactively wager on event outcomes. Event outcomes may be based on, for example, financial markets and indices, sporting and entertainment events, casino performances, and natural phenomena such as weather and earthquakes. Events on which wagers can be placed include both those with known and unknown outcome probabilities, and wagers can be a fixed-odds type or a spread-bet type. Wager transactions, including acceptances and confirmations, are executed in real time. Clients can customize displays of events on which they are authorized to wager. Real-time client credit management, automatic dealer hedging, automatic price-spread adjustments, and automatic client and dealer defined wagering limits are also provided.



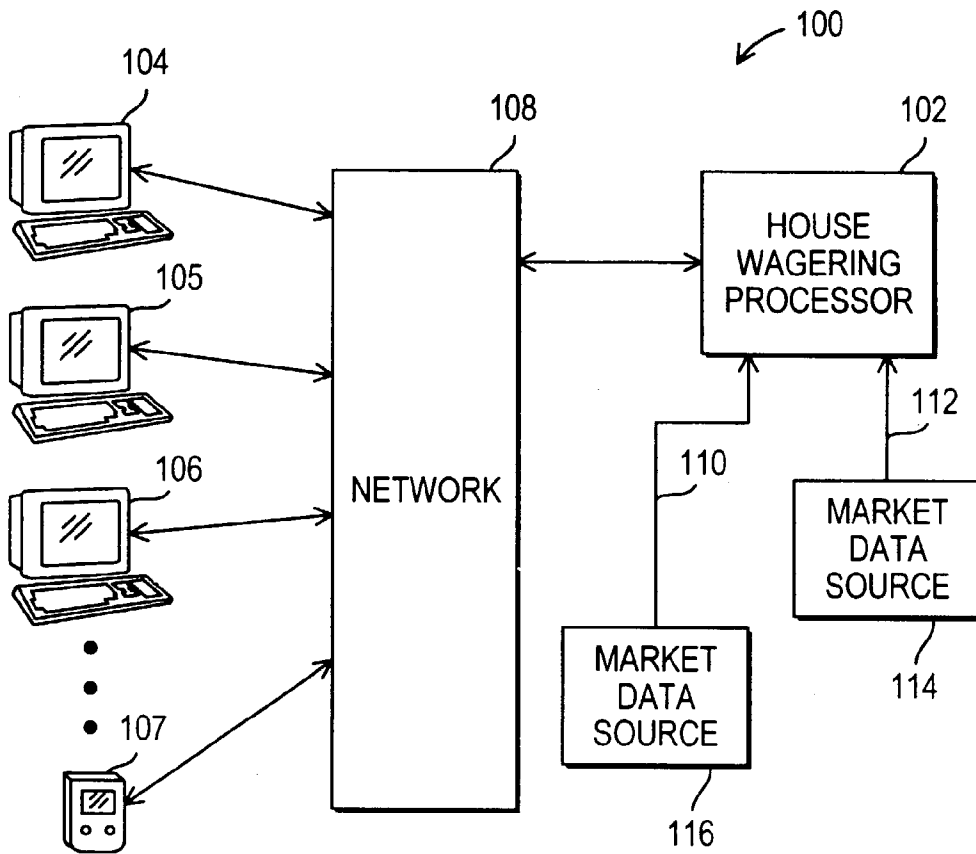


FIG. 1

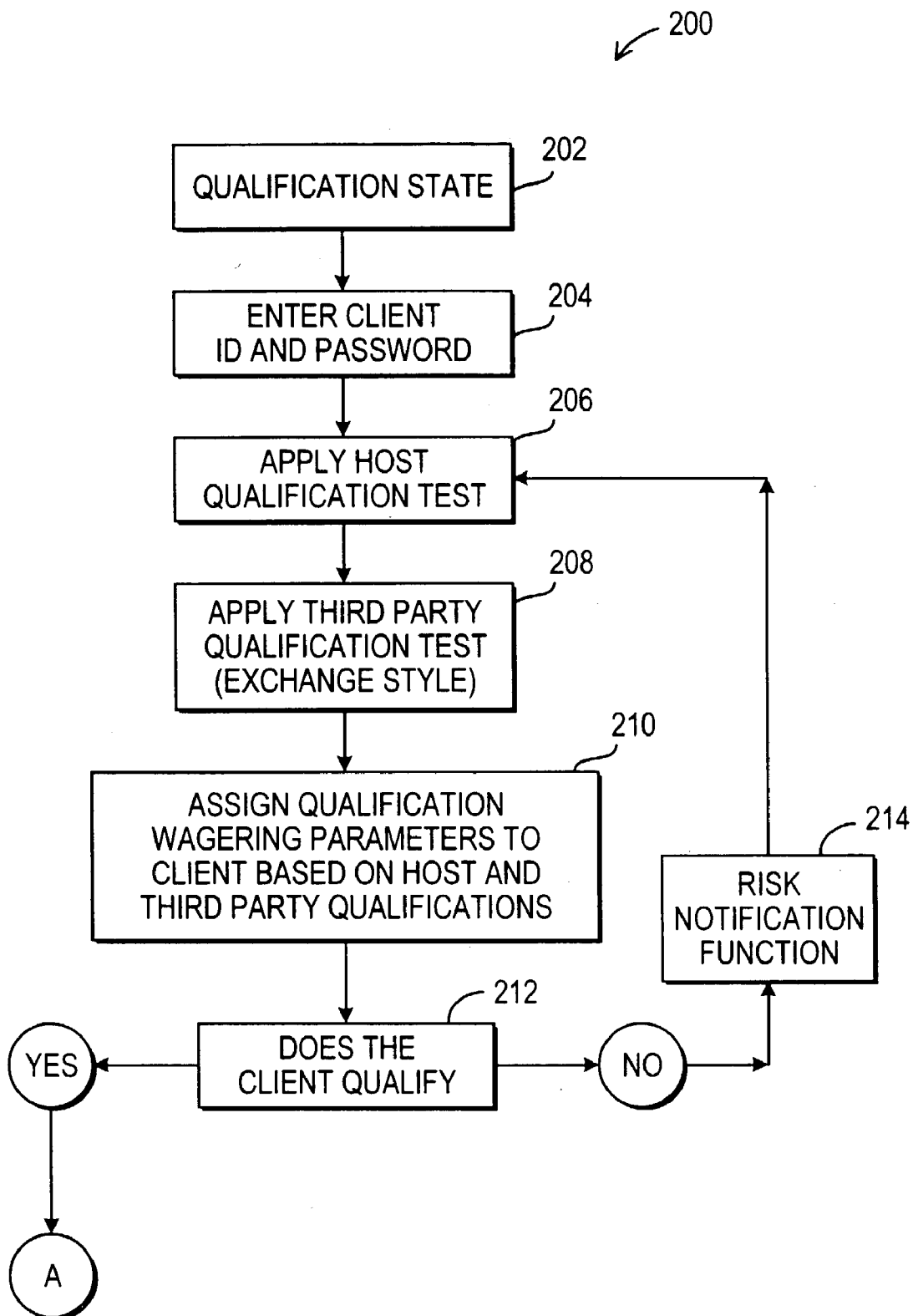


FIG. 2

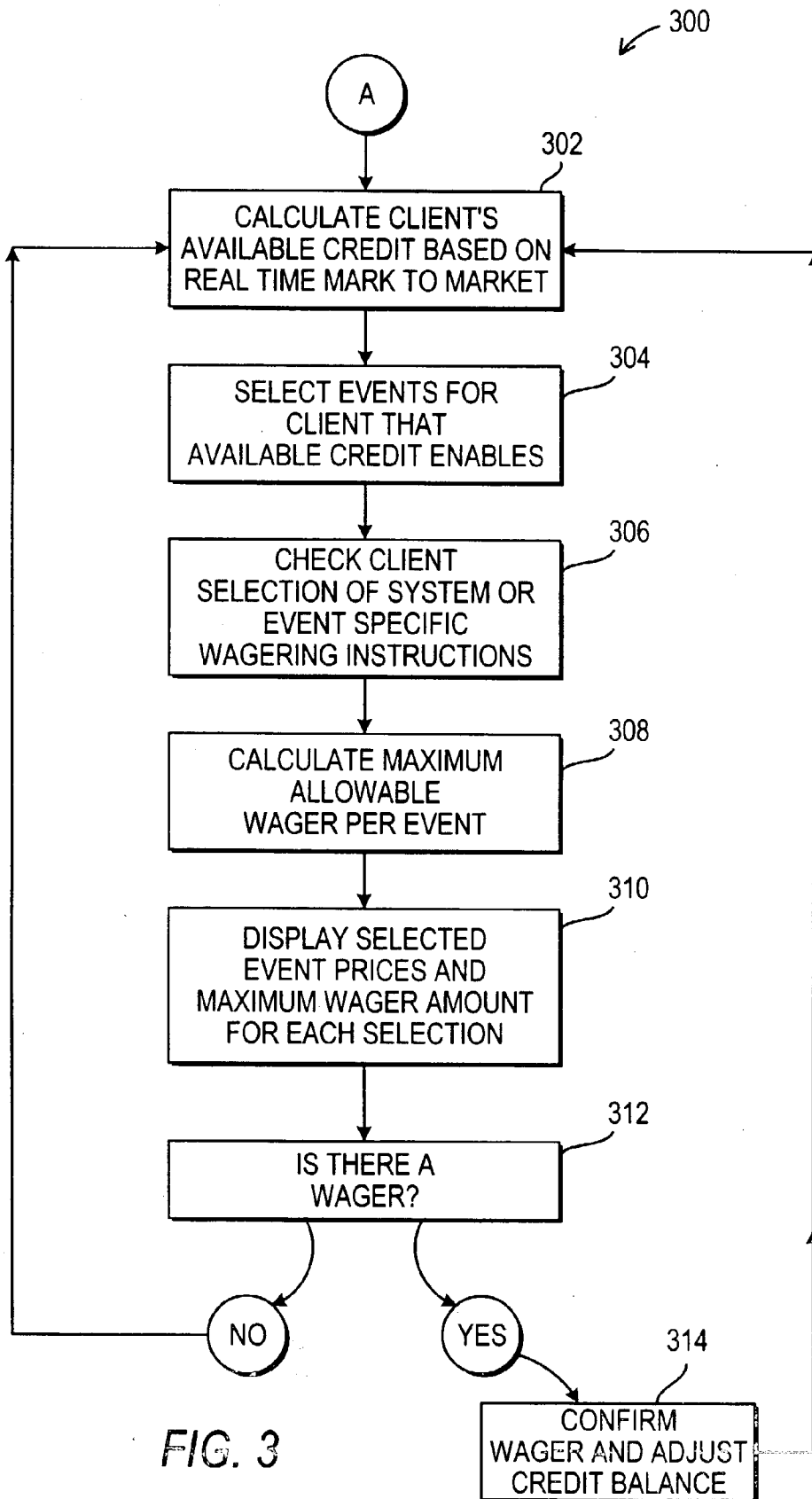


FIG. 3

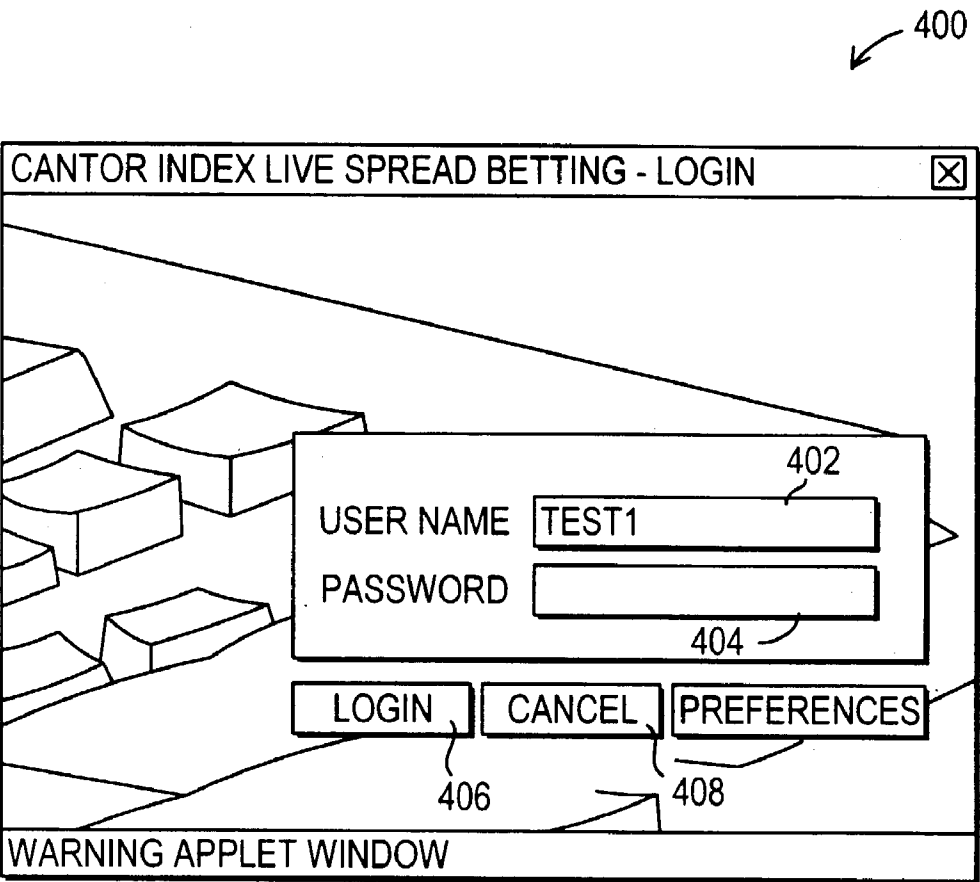


FIG. 4

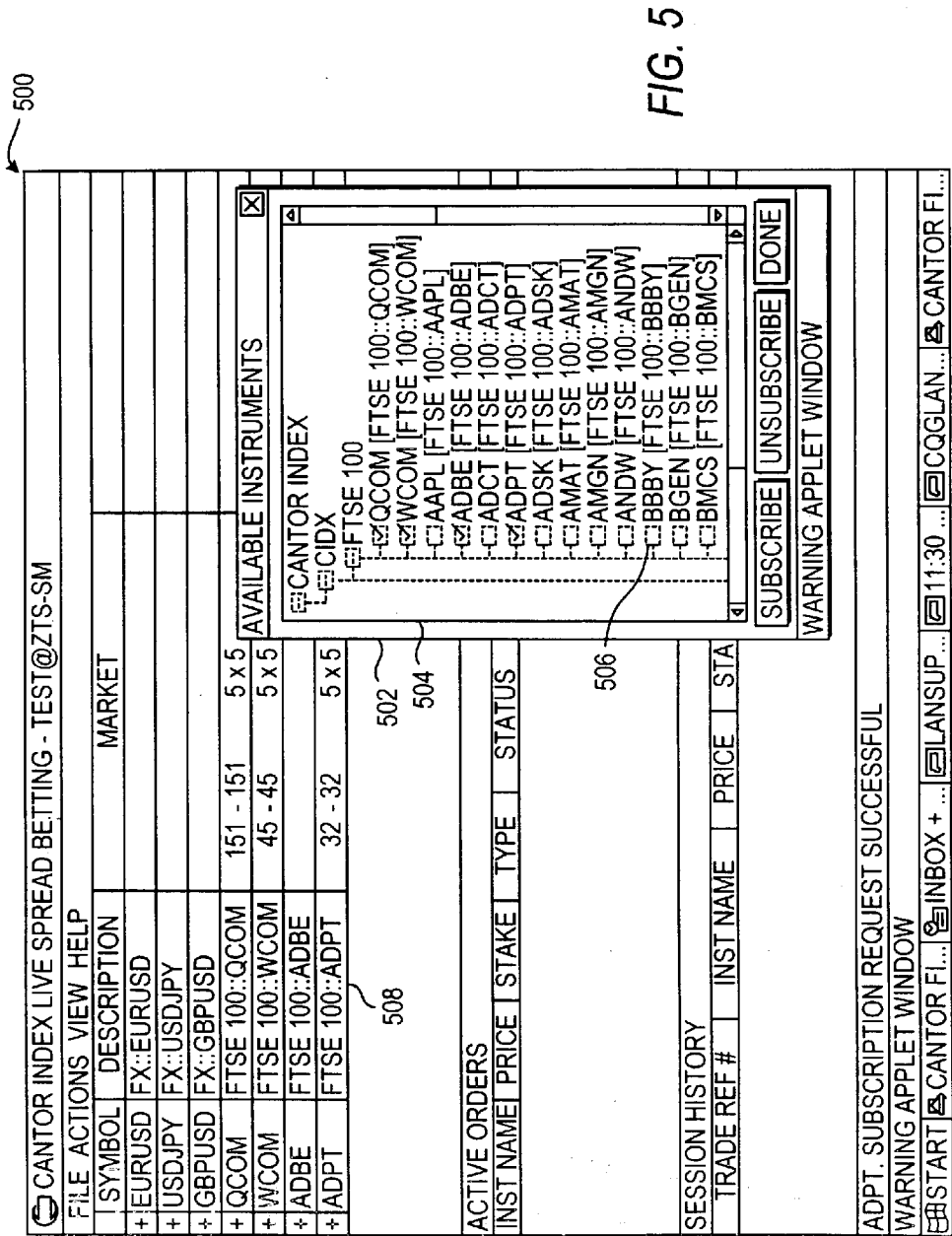


FIG. 5

CANTOR INDEX LIVE SPREAD BETTING - TEST@ZTS-SM

FILE ACTIONS VIEW HELP

SYMBOL	DESCRIPTION	MARKET
+ EURUSD	FX:EURUSD	
+ USDJPY	FX:USDJPY	
+ GBPUSD	FX:GBPUSD	
+ QCOM	FTSE 100::QCOM	151 - 151 5 x 5
+ WCOM	FTSE 100::WCOM	QCOM [FTSE 100::QCOM]
+ ADBE	FTSE 100::ADBE	MARKET
+ ADPT	FTSE 100::ADPT	FTSE 100::QCOM

ACTIVE ORDERS

INST NAME	PRICE
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SESSION HISTORY

TRADE REF #

602

ADPT. SUBSCRIPTION REQUEST SUCCESSFUL

WARNING APPLET WINDOW

START CANTOR FI... INBOX + ... LANSUP ... 11:30 ... COGLAN... CANTOR FI...

600

MARKET

FTSE 100::QCOM

AUTO STAKE AMOUNT/CURRENCY

2	3	4	5	10	15	20	25	50	75	100
---	---	---	---	----	----	----	----	----	----	-----

CURRENCY GBP STAKE 25

SELL / BUY

YOU SELL 151 614

YOU BUY 618 151

TRANSMIT

CLEAR

WARNING APPLET WINDOW

606

610

612

608

616

620

FIG. 6

CANTOR INDEX LIVE SPREAD BETTING - TEST@ZTS-SM

FILE ACTIONS VIEW HELP

SYMBOL	DESCRIPTION	MARKET
+EURUSD	FX::EURUSD	
+USDJPY	FX::USDJPY	
+GBPUSD	FX::GBPUSD	
+QCOM	FTSE 100::QCOM	151 - 151 5 x 5
+WCOM	FTSE 100::WCOM	
+ADBE	FTSE 100::ADBE	
+ADPT	FTSE 100::ADPT	

ACTIVE ORDERS

INST NAME	PRICE

SESSION HISTORY

TRADE REF #	

602

QCOM [FTSE 100::QCOM]

- MARKET

FTSE 100::QCOM

AUTO STAKE AMOUNT/CURRENCY

2	3	4	5	10	15	20	25	50	75	100
---	---	---	---	----	----	----	----	----	----	-----

CURRENCY GBP STAKE 25 610

- SELL / BUY

YOU SELL

151

722

YOUR BUY PRICE

151

618

YOU BUY

151

620

TRANSMIT

724

CLEAR

WARNING APPLET WINDOW

ADPT. SUBSCRIPTION REQUEST SUCCESSFUL

WARNING APPLET WINDOW

START CANTOR FI... INBOX + ... LANSUP... 11:30 ... CQGLAN... CANTOR FI...

FIG. 7

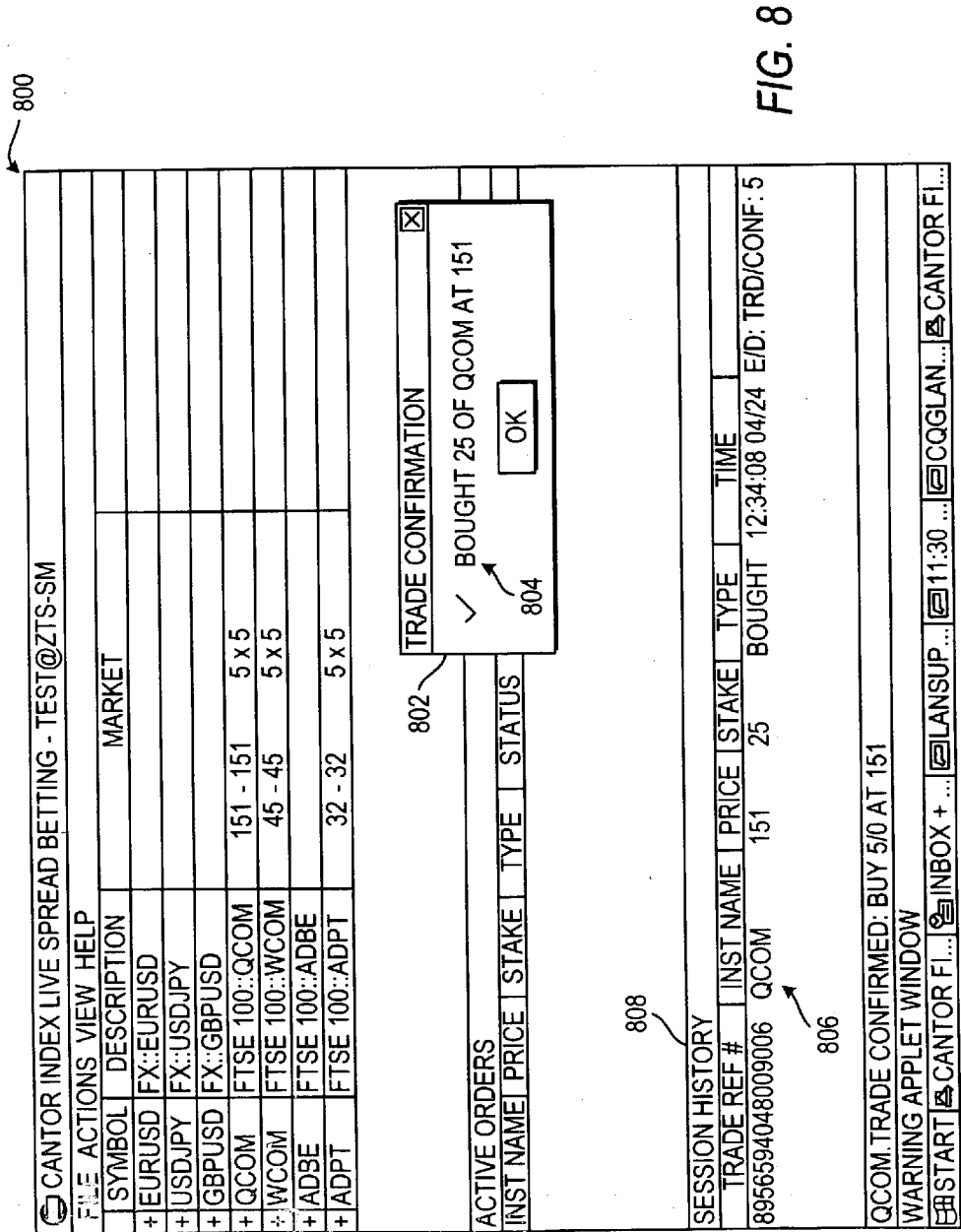


FIG. 8

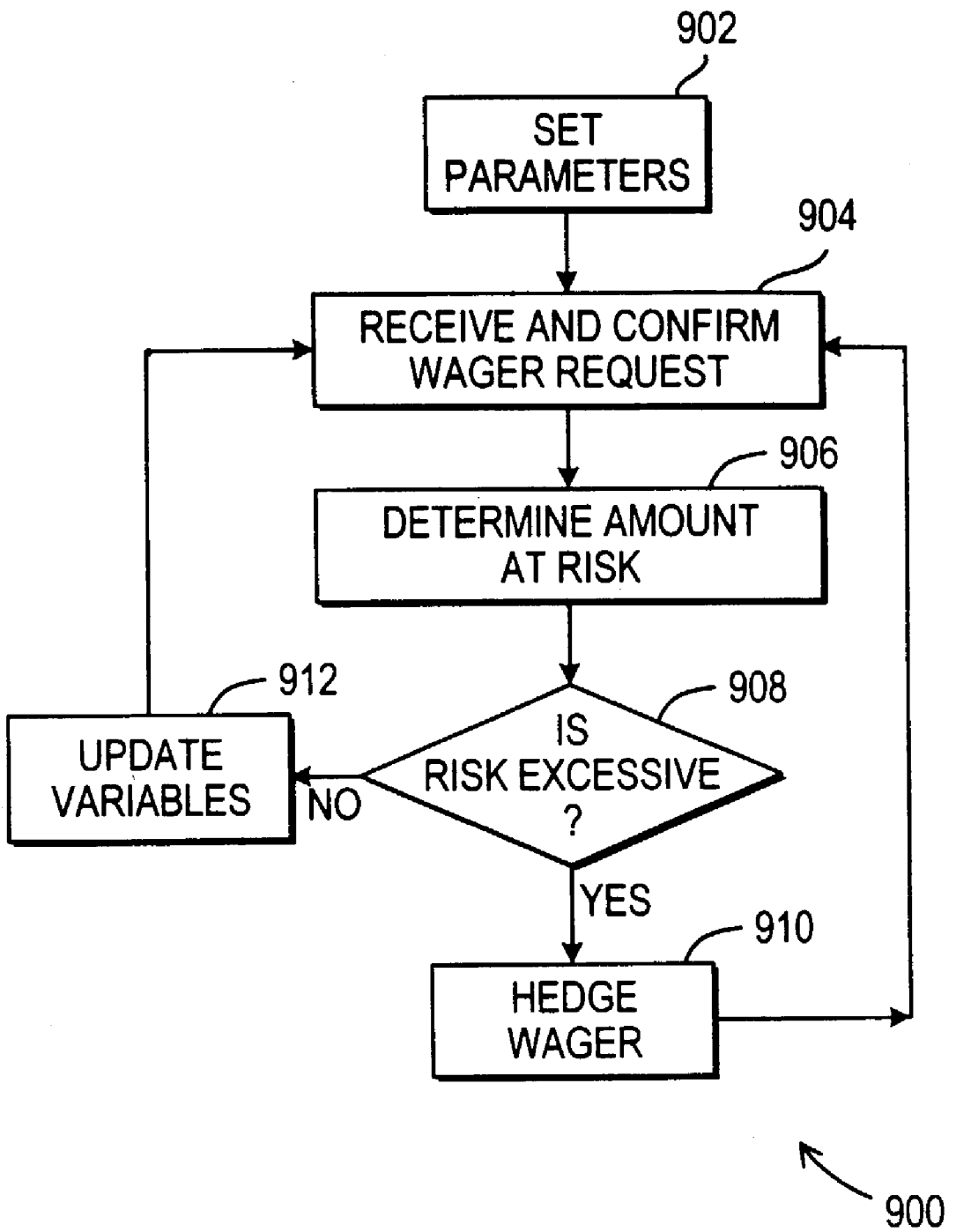


FIG. 9

REAL-TIME INTERACTIVE WAGERING ON EVENT OUTCOMES

CROSS REFERENCE TO RELATED APPLICATION

[0001] This claims the benefit of U.S. Provisional Application No. 60/201,038, filed May 1, 2000.

BACKGROUND OF THE INVENTION

[0002] The present invention relates to real-time interactive wagering on event outcomes. Event outcomes may be based on, for example, financial markets and indices, sporting and entertainment events, political events, games of chance, and natural phenomena such as weather and earthquakes. Wagers can be of a fixed-odds type or a spread-bet type (both described further below). Wagers can be placed on, for example, the change in the Consumer Price Index for a given month; a nation's Gross Domestic Product (GDP); a casino's payout or winnings at blackjack over a given period; the team that will win baseball's World Series; the actor that will win an Academy Award; and the price movement of individual stocks, gold, commodities, or any real-time index. Events on which wagers can be placed include both those with known and unknown outcome probabilities. The present invention does not, however, involve trading of financial instruments.

[0003] Current wagering systems are often slow and inefficient, and thus do not offer clients real-time wagering. Many known systems conduct wagering manually by telephone. Even known online wagering systems do not offer real-time wagering. Processing delays are commonly incurred between initially placing a wager and receiving confirmation of that wager. For example, after a client places a wager, the client's available credit is usually checked before the wager is accepted and confirmed. During such processing delays, the price of a desired wager can and often does change. Thus clients may not at times get the prices originally presented. Moreover, presented wager prices are typically not current, but often may lag actual prices by as much as 5-10 minutes. Another disadvantage of known wagering systems is their limited selection of events on which to wager. Known systems and methods generally cannot easily establish wagering on customized or client-requested events, such as, for example, the snowfall in New York's Central Park next Christmas Day.

[0004] In view of the foregoing, it would be desirable to provide real-time interactive wagering on event outcomes.

[0005] It would also be desirable to provide real-time interactive wagering on event outcomes with real-time transaction confirmation.

[0006] It would further be desirable to provide real-time interactive wagering on event outcomes with real-time management of client-wagering credit.

[0007] It would still further be desirable to provide real-time interactive wagering on event outcomes with automatic wager-tracking indices.

[0008] It would yet further be desirable to provide real-time interactive wagering on event outcomes with automatic dealer hedging.

[0009] It would also be desirable to provide real-time interactive wagering on event outcomes with automatic price-spread adjustments.

[0010] It would further be desirable to provide real-time interactive wagering on event outcomes with automatic forward price setting.

[0011] It would still further be desirable to provide real-time interactive wagering on event outcomes with selectable foreign or domestic currencies.

SUMMARY OF THE INVENTION

[0012] It is an object of this invention to provide real-time interactive wagering on event outcomes.

[0013] It is also an object of this invention to provide real-time interactive wagering on event outcomes with real-time transaction confirmation.

[0014] It is further an object of this invention to provide real-time interactive wagering on event outcomes with real-time management of client-wagering credit.

[0015] It is still further an object of this invention to provide real-time interactive wagering on event outcomes with automatic wager-tracking indices.

[0016] It is yet further an object of this invention to provide real-time interactive wagering on event outcomes with automatic dealer hedging.

[0017] It is another object of this invention to provide real-time interactive wagering on event outcomes with automatic price-spread adjustments.

[0018] It is still another object of this invention to provide real-time interactive wagering on event outcomes with automatic forward price setting.

[0019] It is yet another object of this invention to provide real-time interactive wagering on event outcomes with selectable foreign or domestic currencies.

[0020] In accordance with this invention, a data processing computer and a plurality of client workstations are provided that communicate interactively via a network. The workstations can be, for example, personal computers, laptop computers, mainframe computers, dumb terminals, personal digital assistants (PDAs), cellular phones, or other portable devices having network capabilities. The network can be, for example, the Internet, an Ethernet, a token ring, a token bus, or any other suitable communications medium or configuration that links the workstations with the data processing computer. The present invention operates interactively with online clients preferably via an Internet Web site.

[0021] The present invention preferably provides automatic real-time client credit management, real-time online corroborated wager prices, real-time interactive transaction confirmation, automatic price-spread adjustments, automatic setting of forward pricing, automatic wager-tracking indices, automatic dealer hedging, automatic client and dealer defined wagering limits, and multiple-price wagering. Other features of the present invention include choice of currencies for buying and selling, and provisions for evaluating and establishing wagering on events requested by clients. The present invention can be deployed in a dealer

environment in which clients wager with the “house,” which acts as dealer, or in a brokerage environment in which clients wager with other clients or combinations of other houses, one or more of the houses acting as broker or another dealer.

BRIEF DESCRIPTION OF THE DRAWINGS

[0022] 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:

[0023] **FIG. 1** is a block diagram of a system for real-time interactive wagering in accordance with the present invention;

[0024] **FIG. 2** is a flow diagram of a client qualification process in accordance with the present invention;

[0025] **FIG. 3** is a flow diagram of a client credit management process in accordance with the present invention;

[0026] **FIGS. 4-8** are a series of screen displays illustrating an interactive wager transaction in accordance with the present invention; and

[0027] **FIG. 9** is a flow diagram of an automatic hedging process in accordance with the present invention.

DETAILED DESCRIPTION OF THE INVENTION

[0028] The present invention is directed to systems and methods for real-time interactive wagering on event outcomes. The systems and methods of the present invention may be implemented using a data processing computer and a plurality of client workstations that communicate interactively with the computer via a network.

[0029] **FIG. 1** illustrates a real-time interactive wagering system **100** according to the present invention. The system includes a house wagering processor **102** and a plurality of client workstations **104-107**, all of which are linked together via network **108**. Wagering processor **102** can be, for example, a data processing computer having appropriate processing speed and memory capacity. Client workstations **104-107** can be directly or remotely connected to processor **102** and can be, for example, personal computers, dumb terminals, personal digital assistants (PDAs), laptop computers, mainframe computers, cellular telephones with Internet capabilities, or other devices capable of communicating with processor **102** via network **108**. Network **108** can be, for example, the Internet, an Ethernet, a token ring, a token bus, or any other suitable communication medium or configuration that links the workstations with processor **102** to provide real-time interaction. In a preferred embodiment, clients preferably interact with the system via an Internet Web site.

[0030] Wagering system **100** also includes electronic feeds **110** and **112** each coupled to processor **102** and to respective preferably independent market data sources **114** and **116**. As described further below, market data sources **114** and **116** each provide pricing and other information regarding known markets, indices and the like (e.g., S&P 500, stock prices, etc.). Electronic feeds **110** and **112** can be any communication medium that transmits available market data and changes thereof substantially immediately.

[0031] An account with “the house” is first opened by establishing credit in any known or appropriate manner. For example, credit may be established by submitting a financial statement or credit report, by authorizing the house to charge a credit card, or by depositing cash or securities with the house. The house is likely to then further qualify a client in accordance with either conventional standards of the financial industry, proprietary standards of the house, or a combination of both. Qualification standards may be further based on wagering in either a dealer environment, a brokerage environment, or both.

[0032] **FIG. 2** shows an embodiment of a client qualification process according to the present invention. Qualification process **200** begins at qualification state **202** after a client has opened an account and has established a line-of-credit as described above. At **204**, the client logs in to the wagering system by entering an identifier (ID) and a password at one of client workstations **104-107**. At **206**, house wagering processor **102** applies a predetermined house qualification test on the client’s line-of-credit and other financial information as deemed appropriate by the house. This test determines whether the client is currently qualified to wager on currently available event outcomes or particular subsets thereof. At **208**, the house wagering system preferably applies a third-party qualification test for wagering in one or more brokerage environments. After applying the house and third-party qualification tests, wagering parameters are assigned to the client at **210**. These wagering parameters can include, for example, the types of available event outcomes, available third-parties, and associated wagering minimums. At **212**, the wagering system determines whether the client qualifies to participate in wagering based on the assigned wagering parameters and the client’s current financial situation. If qualified, the client can proceed to wager on selected event outcomes. If the client does not qualify, the system performs a risk notification function at **214**. The client may then be informed of the non-qualification. Additionally or alternatively, the risk notification function may alert the house that further scrutiny of that client’s credentials is required. The system then returns to host qualification test **206** where, if any deficiencies had been corrected by the client or modifications made by the house, the qualification tests are reapplied.

[0033] Once credit is established and the client is qualified to wager, the system automatically manages that credit in real time, and presents to a client—before any wagers are placed—only an amount the client is currently authorized to wager. For example, if a client is authorized to wager \$1000 and wagers \$1000 that the Dow Jones Industrial Average (DJIA) will rise to a certain value by a certain date, and then on another event collects \$1500 from a matured wager, the system automatically updates the client’s credit in real time to authorize the client to wager another \$500. The system will not permit a client to wager more than that client’s authorized amount.

[0034] Moreover, the system preferably presents to a client only those events whose minimum wagering amounts are within the client’s authorized credit. As a client places wagers, the system not only automatically updates the client’s credit in real time, but also updates the displayed list of events on which that client has sufficient authorized credit to wager. Thus, as a client’s credit increases, more events on which to wager may be shown. Conversely, as a client’s

credit decreases, less events on which to wager may be shown. Alternatively, the system can also display other wagers regardless of whether the client's authorized credit meets their minimum wagering amounts. Such other wagers may include the most popular one, a reference set of wagers (e.g., the DJIA and the FTSE with respect to a wager on the price of IBM stock at the end of the month), a wager that is being promoted, wagers likely to be of interest to the client in view of the client's past wagering activity, or wagers in accordance with a client's customized display (described further below).

[0035] FIG. 3 shows an embodiment of a client credit management process 300 according to the present invention. The system determines a client's current available credit at 302. If the client's credit is based upon securities or other variable assets, the current market values of those securities or other assets are ascertained to determine the client's available credit. At 304, the system selects wagerable event outcomes whose minimum wagering amounts do not exceed the client's current available credit. If the client has provided instructions customizing the selection of wagerable event outcomes, at 306, those wagerable event outcomes not in accordance with the client's instructions are removed from the selection of event outcomes. At 308, the system calculates a preferably maximum amount that the client is authorized to wager for each of the selected wagerable event outcomes. At 310, the selected wagerable event outcomes and their respective authorized wager amounts are displayed to the client. At 312, if a request to wager is not received within a predetermined time period, the system returns to 302. If a request to wager is received, at 314 acceptance of the wager is confirmed and the client's available credit is substantially immediately adjusted. The system then returns to 302.

[0036] The system preferably also includes a reward feature that in accordance with house criteria rewards clients with either additional credit or other types of gifts. House criteria may include, for example, placing a certain number of wagers within a specified period of time, placing wagers on certain events, or wagering or winning certain amounts. The house may also wish to console clients who have recently lost a wager by increasing their credit or providing some other reward.

[0037] The system displays wagerable events, current wager prices, and preferably other market data. The displayed information is preferably customizable. For example, a client may wish to see only wagerable events of interest (e.g., basketball events) or only those events upon which that client has placed wagers. For clients who have not customized their display, the house can initially set and then later modify display defaults in accordance with house policies and objectives. Moreover, the house can optionally override a client's display defaults either temporarily or permanently to notify a client of, for example, new wagerable events or special wagering prices of events not displayed by that client.

[0038] Displayed wager prices are updated in real time as price changes occur. To ensure that displayed pricing information and market data based on existing markets are accurate, the system corroborates displayed data with preferably multiple electronic feeds from at least two sources where possible. Because data from multiple sources are not

likely synchronized with respect to time, the system preferably performs such synchronization. If prices from multiple sources do not agree with each other after synchronization, the system may widen the spread, cancel bids/offers, or not accept any further wagering. This feature can advantageously avoid potentially costly errors.

[0039] The system provides each client with a customizable preferably single display that shows, for example, various wagerable events on which that client can wager, prices for those events, applicable maturity (e.g., end of day, end of quarter, etc.), and authorized funds with which that client can wager. The maturity of an event outcome is the time, date, or time and date on which a wager on that event outcome concludes. For example, an event outcome may be a casino's slot machine payouts and its maturity may be every hour on the hour each day. The status of an event outcome at its maturity determines the outcome of wagers placed on that event.

[0040] Wagers can be of at least two types—a fixed-odds wager or a spread-bet wager. A fixed-odds wager involves a fixed amount wagered on an event outcome that matures on a predetermined future date and time. For example, the house acting as a dealer, or another wagerer with the house acting as a broker, may offer 10:1 odds that the S&P 500 index will not exceed a certain level as of 4:00 p.m. on a certain day. A client may then wager a fixed amount that the S&P will exceed that level. At the maturity date and time, the client will either lose the wagered amount or win 10 times the wagered amount. Thus, in this type of wager, the client's stake (i.e., the wagered amount) is fixed, and the risk to both the client and the dealer or other wagerer is known.

[0041] A spread-bet wager involves a fixed amount wagered on each incremental movement of a continuous event (e.g., a stock price, the S&P 500 index, etc.) until a predetermined maturity (e.g., end of day, week, or quarter). For example, assume the wagerable event is the movement of Index X until the end of the current quarter. The current price of Index X is \$1500. The house may set an offer price of \$1505 and a bid price of \$1495, and the wager may be \$100 per tick (a tick is the smallest incremental movement of an event). To wager that Index X will rise, a client "takes" the \$1505 offer. For each tick rise in Index X, the client's stake increases \$100; for each tick drop in Index X, the client's stake decreases \$100. To wager that Index X will drop, a client "hits" the \$1495 bid. Accordingly, for each tick drop in Index X, the client's stake increases \$100; for each tick rise in Index X, the client's stake decreases \$100. Potential winnings are for the most part unlimited, subject only to the amount of favorable movement of the continuous event until maturity, while losses are generally limited to the client's maximum credit.

[0042] To hedge a spread-bet wager before maturity (e.g., because a client is losing too much), the client can place an opposite wager. For example, if the original wager involved the price rise of XYZ stock by the end of the quarter, but after the first week, the price drops precipitously, the client can hedge that wager by placing (quickly) another wager that the price of XYZ will drop by the end of the quarter. Thus, any additional losses incurred in the original wager will be substantially offset by gains made on the hedged wager. Similarly, however, should XYZ stock reverse direction before the end of the quarter, any gains made on the

original wager will also be substantially offset by losses incurred in the hedged wager.

[0043] After a client enters one or more wagers on one or more selected events, the transaction is confirmed in real time. Substantially no processing delays are incurred primarily because the client has already been qualified and the selected events and wagered amounts have already been authorized.

[0044] If a wager price should change as a client places a wager, the system will prompt the client to confirm acceptance of the price change. This price retention feature is implemented substantially as described in U.S. patent application Ser. No. 09/553,423, filed Apr. 19, 2000, entitled "SYSTEMS AND METHODS FOR TRADING", now U.S. Pat. No. _____, which is hereby incorporated by reference, but in the context of online interactive wagering.

[0045] FIGS. 4-8 show embodiments of interactive display screens according to the present invention as a wager is being placed.

[0046] FIG. 4 illustrates a representative login screen 400 according to the invention. A client logs in to the system before placing wagers. The client enters a user name in data entry field 402 and a password in data entry field 404. The client then selects login button 406 to submit the user name and password to the wagering system. Alternatively, the client can select cancel button 408 to exit login screen 400 without logging in to the system.

[0047] FIG. 5 illustrates a representative screen display 500 according to the invention shown after a client has logged in to the system. Pop-up screen 502 contains a scrollable list 504 of wagerable event outcomes on which the client is authorized to wager. The client may select a check box 506 next to a corresponding wagerable event outcome that the client wishes to add to a list 508 of previously selected wagerable event outcomes currently being monitored on screen 500. To place a wager on an event, the client may, for example, double-click on a wagerable event outcome from list 508 to enter wagered amounts and other information as required.

[0048] FIG. 6 illustrates a representative screen display 600 according to the invention shown after a client has double-clicked on a wagerable event outcome on list 508. A pop-up screen 602 displays the following: the name of the double-clicked wagerable event outcome in display field 604, a series of buttons 606 representing preset wager amounts, a drop-down list 608 for selecting a desired currency in which to wager, a stake data entry field 610 where the client can enter a wager amount 612 as an alternative to selecting one of wagering amount buttons 606, a sell button 614 and a corresponding sell price 616, and a buy button 618 and a corresponding buy price 620.

[0049] FIG. 7 illustrates a representative screen display 700 according to the invention showing pop-up window 602 after a client has entered an amount of "25" into stake data entry field 610 and selected buy button 618. After the client clicks on buy button 618, buy price 620 is indicated in field 722 and transmit button 724 is enabled.

[0050] FIG. 8 illustrates a representative screen display 800 according to the invention shown after a client clicks on transmit button 724 of FIG. 7. Pop-up window 802 advan-

tageously provides in real time a confirmation message 804 that wager 806 has been accepted. Wager 806 is displayed in session history display 808.

[0051] Note that in each of the above screen displays, alternatives to the pop-up windows can be used to display and enter the information shown.

[0052] To help manage both clients' and dealer's risk, the system preferably includes index processing capabilities that provide numerous automatic wager-tracking indices to monitor wagering activity and market or event performances. For example, the system can indicate how many wagers have been placed, how much has been placed, and on what they have been placed. Historical and current results of placed wagers (e.g., how much has been won and lost) along with any other data related to wagered events can also be indexed and displayed. Moreover, clients can create customized indices and customized displays of indices. For example, a client can customize and display an index showing the client's win-loss ratio over the last 20 wagers or the last month. Advantageously, displayed indices are updated in real time as new information is entered or received by the system. As a default, the house determines what indices are available to clients.

[0053] The system also preferably provides automatic verbal language translations of displayed indices and other information (e.g., "Clients are buying event #1," or "1000 wagers placed on event #2"). Text versions of displayed indices are preferably automatically provided in a client selected language.

[0054] The system preferably hedges automatically in response to client wagering. FIG. 9 illustrates a hedging process 900 according to the invention. Generally, hedging is a strategy used to offset investment risk. For example, if clients are wagering heavily that the price of oil will increase to a particular level, the house may buy one or more options or futures contracts to hedge the positions taken by clients. The system initially sets hedging parameters at 902 in accordance with the amount of risk the house is willing to take. As wagers are placed at 904, the system at 906 automatically analyzes wagering data and applicable market conditions and determines whether the house should hedge and, if so, by how much and in what markets. Preferably, the system's hedging analysis also takes into account the skill of particular clients (e.g., via past performance) and the size of their wagers. For example, if a known client wagers a large amount, and that client is more likely to win than lose based on that client's past performance, the house may hedge sooner or more substantially than if that client were more likely to lose.

[0055] If the system at 908 determines that the house should hedge, it may go to one or more preferably correlated markets and automatically complete one or more transactions. If no market is available or appropriate to sufficiently hedge client positions, the system may hedge by increasing the price spread or by choosing to show only bids or only offers. If the system determines that hedging is not necessary, no hedging transactions will be executed. However, hedging variables will be updated at 912 to reflect current client positions, and hedging orders may be readied for immediate execution should client positions move such that hedging becomes necessary.

[0056] For each event in which wagers can be placed, the system initially sets a spread (i.e., sets bid and offer prices)

and then dynamically resets and skews the spread where appropriate in accordance with the house's policies and objectives as wagers are placed. System 100 preferably includes a neural network (i.e., a learned algorithm; not shown in FIG. 1) that bases a spread on market conditions, past performance, and other data, such as, for example, current market volatility, current direction of the market, underlying position of the house, amount and direction of the most recent wagers, liquidity of market, and liquidity of hedging markets. Accordingly, spreads can be increased, decreased, or skewed (i.e., shifted such that the actual wager price is no longer in the center of the spread). The neural network balances the need to ensure an adequate profit, thus preferably avoiding too narrow a spread, versus the need to attract clients, thus preferably avoiding too wide a spread. For example, an initial spread for a particular event outcome may be set at a bid of 5 below and an offer of 5 above the actual price. Thus, if the actual price is \$105, the bid price is \$100 and the offer price is \$110. If the market for that event outcome moves rapidly upward (e.g., because many are bullish), the system may skew the spread upward, setting the bid price at 1 below and the offer price at 9 above the actual price. Alternatively, because wagerers tend to be contrarians, the system may skew wager prices contrary to the direction of the underlying market.

[0057] The house can also use this feature to offset either its own or its clients' performance in one market by dynamically adjusting the spread in other markets. Thus, this feature gives the house an opportunity to control profit.

[0058] Additionally, the system preferably offers multiple pricing of wagerable events. That is, the system can customize the price spread of an event to individual clients or groups of clients in accordance with, for example, credit quality, number of wagers placed, size of wagers, or wager performance. For example, the system may discount wager prices to a client who has recently suffered several losses. Similarly, the system may discount prices or add a premium to clients who wager large amounts.

[0059] The system of the present invention preferably operates 24 hours/day, 7 days/week. This allows clients to wager at their convenience. However, many of the existing markets upon which wagerable events may be based are operated at only certain times on certain days. Clients interested in obtaining prices from those markets for specific current or future dates may not be able to get those prices either because the particular market is closed at the time of the inquiry or because that market did not quote prices for that specific date.

[0060] Advantageously, the system automatically calculates a value for the requested wager price for the requested date using established prices from known market dates and other market information. In particular, the system preferably calculates wager prices by correlating prices of different, but preferably related, markets where possible. This helps to forecast the direction of the closed market and thus determine a reasonable requested wager price. For example, if a client requests a price from the FTSE market, but that market is currently closed, the system may calculate a price based on a currently open market, such as, for example, the DJIA, and its correlation with the FTSE. Other data such as the placement of the most recent wagers and known carry-

ing-costs (e.g., interest, dividends, commodity storage charges, etc.) are also preferably included in the calculation of unavailable wager prices.

[0061] The system preferably automatically helps clients control risk. The house, a client, or both can enter instructions (e.g., criteria) into the system defining, for example, when too much has been wagered or lost. If the criteria is met during wagering, the system can warn or prevent the client from wagering further. For example, the house may have the system warn a client when the client loses over 40% of his credit in 4 hours. A client may decide that the system should halt the client's wagering when the client loses 50% of his credit in 1 hour. Moreover, should the client's criteria be met, the system will not only prevent the client from continued wagering, but preferably will take the client out of the online wagering environment and provide the client with a pre-selected non-wagering environment. For example, clients may indicate that when a wagering limit is reached, they would like to see a display of a specific picture (e.g., of their family). Or, they may want to play video games or be put in an online chat-room, etc. This change of atmosphere away from the wagering environment provides clients with a cooling off period in which they can reassess their wagering activity and results.

[0062] The system preferably also includes an automatic stop-loss feature in which clients can enter specific criteria into the system that will invoke stop-loss wagering. Upon invocation, this feature automatically places offsetting wagers to offset, for example, a client's losses from previously placed spread-bet wagers. Preferably, an automatic readjustment mechanism regulates in real time combinations of stop-loss features (e.g., raising one and lowering another in a two wager client profile).

[0063] The system preferably allows clients to select particular currencies when placing wagers and when receiving proceeds from successful wagers. Clients can thus additionally take on currency exchange risk. The currency chosen by a client when placing a wager may be different than the currency chosen at pay-out. For example, a wager can be placed in euros and paid out in U.S. dollars. The currency to be paid-out and place of payment can be selected at any time during the wager or at time of payment.

[0064] At a specified time (e.g., every hour, every day, after the outcome of a specific event, etc.), the system determines settlement prices based on predetermined criteria. This "marking to market" process fixes a price for a wagerable event outcome or ends a wager. Final wager prices can be based on, for example, event market conditions, which in turn may be based on the number of wagers placed, the amounts of the wagers, the win-loss ratio of placed wagers, and the potential amounts that stand to be won or lost.

[0065] To facilitate wagering at remote workstations, clients can be optionally issued a universal wagering debit-type card that contains identification and financial information, including authorized credit. A client preferably initiates a wager by first inserting the card into a card reader at a workstation, which then preferably establishes communication between the client and the house. This can be done instead of or subsequent to the login process described above. Each time a client transacts a wager, the master financial information files maintained by the system are

updated. When the client is finished wagering, the financial information on the client's card is updated and the card is ejected from the card reader. Alternatively, the card can be swiped once to establish communication with the house and swiped again to debit the card with each contemplated wager before that wager is submitted. Upon winning a wager, the card can be swiped to credit all or part of the amount won. As another alternative, the card can be fabricated with an electronic transmitter/receiver circuit that automatically initiates communication with the house and receives transmitted updated financial information at an appropriately equipped workstation.

[0066] Other features of the wagering card according to the invention preferably include issuing the card anonymously with prepaid credit (e.g., to be given as a gift). Upon the prepaid card's first use by a client (after preferably logging in as described with respect to FIG. 4), the system's master financial files are updated. The card can be preferably used at banks to obtain cash (e.g., up to the authorized credit amount), and used in traditional financial transactions (e.g., to buy shares of stock at a conventional brokerage firm). The card can also be preferably independently updated with an increase in credit at, for example, a financial institution that may have a relationship with the house. The newly updated credit encoded on the card can later be transmitted (e.g., upon insertion into a card reader at a workstation) to the system's master financial files, or the credit can be maintained on the card and debited or credited on a transactional basis. The card can further be preferably used to wager even though access to the system's master financial files is currently unavailable (e.g., because of some technical reason).

[0067] The system preferably evaluates client requests for wagering on events that may not be based on an existing market, such as, for example, a particular athlete's likelihood of winning a gold medal at the next Olympics or a casino's likelihood of paying out more than particular amount at roulette over a certain period. If the house approves wagering on a client requested event, the system will establish that event as wagerable by, among other things, determining spreads, establishing customizable indices, and notifying all or selected clients of the new event.

[0068] The system preferably includes quantification processing capabilities that establish wagers for various events. For example, a client may request a wager that damage from a particular hurricane will exceed \$5 billion dollars. Before establishing the \$5 billion in hurricane damage as a wagerable event, the system preferably analyzes available data to determine whether the \$5 billion is a feasible amount on which to accept wagers (i.e., within the risk tolerance of the house). The available data that may be analyzed may include, for example, the hurricane's current strength, current location, and targeted onshore arrival location, and amounts of damage caused by past hurricanes of similar strength and circumstances. This feature can be used, for example, by the insurance industry to hedge potential losses from such an event.

[0069] In another embodiment of the present invention, the house may not only act as a dealer to one-sided wagers (i.e., wagers between clients and the house), but may also act as a broker to two-sided wagers (e.g., wagers between clients, between clients and other houses, and between other houses). In this environment (also known as an exchange environment), the system allows qualified clients or dealers

(other houses) to enter bids and offers to be displayed to other clients or dealers, and enables each house to control dealer risk.

[0070] The brokerage environment of the present invention preferably includes the following features: a participant qualification state, an instrument creation state, a bid/offer state, a "when" state, a qualified workup state, a price retention state, a price improvement state, a request for market state, a restore state, a price generation state, a position conversion state, and a marking-to-market state. These features are implemented substantially as described in the aforementioned U.S. patent application Ser. No. 09/553,423, but in the context of online interactive wagering.

[0071] Moreover, the brokerage environment of the present invention also preferably includes the following features: an order gathering state, a marketing making state, a trade order allocation state, a multiple wagering state, and a request for size state. These features are implemented substantially as described in U.S. patent application Ser. No. 09/593,554 entitled "SYSTEMS AND METHODS FOR ELECTRONIC TRADING THAT PROVIDE INCENTIVES AND LINKED AUCTIONS," filed on Jun. 14, 2000, now U.S. Pat. No. _____, which is hereby incorporated by reference, but in the context of online interactive wagering.

[0072] Thus it is seen that real-time interactive wagering on event outcomes is presented. One 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.

We claim:

1. A method of real-time interactive wagering on event outcomes, said method comprising:

qualifying a client to participate in wagering;

selecting a plurality of wagerable event outcomes in accordance with said qualifying;

receiving a request to wager on one of said event outcomes; and

notifying substantially immediately whether said wager has been accepted.

2. The method of claim 1 further comprising displaying said selected event outcomes at a workstation.

3. The method of claim 2 wherein said displaying and said receiving occur via the Internet.

4. The method of claim 1 wherein said qualifying includes pre-authorizing a monetary limit on wagering.

5. The method of claim 1 wherein said one event outcome comprises which team will win the next Major League Baseball World Series.

6. The method of claim 1 wherein said one event outcome comprises a casino's performance at a game of chance over a predetermined time period.

7. A method of real-time interactive wagering on event outcomes, said method comprising:

providing an Internet Web site that includes a selection of event outcomes;

qualifying a client to participate in wagering;

receiving from said client via said Internet a request to wager on one of said event outcomes;

determining substantially immediately whether said client is qualified to place said wager; and

notifying said client substantially immediately via said Internet whether said wager is accepted.

8. The method of claim 7 wherein said qualifying includes establishing a line of credit for said client.

9. The method of claim 8 further comprising updating said line of credit as wagers are accepted.

10. The method of claim 8 wherein said determining includes determining whether a wagered amount is within said line of credit.

11. A method of real-time interactive wagering on event outcomes, said method comprising:

determining a wagering limit for said client;

selecting wagerable event outcomes on which said client is authorized to wager;

displaying to said client said selection of wagerable event outcomes;

receiving a request from said client to wager on one of said selection of wagerable event outcomes; and

adjusting substantially immediately said wagering limit of said client.

12. The method of claim 11 wherein each said event outcome has a minimum required wager associated therewith, said selection of wagerable event outcomes only including those said event outcomes whose minimum wager is not greater than said wagering limit.

13. The method of claim 12 further comprising re-selecting substantially immediately wagerable event outcomes on which said client is authorized to wager in accordance with said adjusted wagering limit.

14. The method of claim 11 further comprising selecting a currency in which to wager.

15. The method of claim 11 further comprising paying said client in a currency chosen by said client in response to the maturity of successful wager.

16. A method of real-time interactive wagering on event outcomes, said method comprising:

establishing a line of credit for a client;

displaying to said client a selection of event outcomes on which said client is authorized to wager;

receiving a request from said client to wager on one of said selection of event outcomes;

confirming substantially immediately acceptance of said wager;

updating substantially immediately said line of credit of said client; and

updating substantially immediately said selection of event outcomes on which said client is authorized to wager.

17. The method of claim 16 further comprising rewarding said client in accordance with predetermined wagering activity criteria.

18. The method of claim 17 wherein said reward comprises an increase in said line of credit.

19. The method of claim 17 wherein said predetermined wagering activity criteria includes at least one of the following:

the number of wagers placed by said client exceeds a predetermined minimum number of wagers;

said client places a wager on a specified event;

the total value of wagers placed by said client exceeds a predetermined minimum total value amount;

said client wins an amount in excess of a predetermined amount; and

said client loses an amount in excess of a predetermined amount.

20. A method of real-time interactive wagering on event outcomes, said method comprising:

qualifying a client for wagering;

receiving price information for said wagerable event outcomes;

generating a selection of event outcomes on which said client is authorized to wager, each said event having said price information associated therewith;

displaying to said client said selection of event outcomes and associated price information;

updating said display of wagerable event outcomes in real time when said received price information differs from said displayed price information.

21. The method of claim 20 wherein said receiving price information comprises receiving price information from at least two sources.

22. The method of claim 21 further comprising corroborating received price information when said price information received from said sources differs.

23. A method of real-time interactive wagering on event outcomes, said method comprising:

establishing a wagering limit for a client;

receiving from said client instructions defining which wagerable event outcomes are to be displayed;

determining a first selection of wagerable event outcomes on which said client is authorized to wager in accordance with said wagering limit;

determining a second selection of wagerable event outcomes from said first selection in accordance with said client instructions; and

displaying to said client a display of wagerable event outcomes wherein each of said displayed event outcomes is one of said first selection and said second selection;

receiving a request from said client to wager on one of said displayed wagerable event outcomes; and

notifying said client substantially immediately whether said wager has been accepted.

24. The method of claim 23 wherein said instructions includes a preferred language in which to display said wagerable events.

25. A method of real-time interactive wagering on event outcomes, said method comprising:

qualifying a client to participate in wagering;

displaying to said client a plurality of event outcomes, each said event outcome having a displayed price associated therewith;

receiving a request from said client to wager on one of said plurality of event outcomes at said displayed price associated with said event outcome;

determining whether said displayed price of said event outcome is the same as the current price of said event outcome; and

notifying said client substantially immediately if said current price is different from said displayed price.

26. A method of real-time interactive wagering on event outcomes, said method comprising:

receiving a request from a client to wager on an event outcome on which said client is authorized to wager;

determining automatically an amount to hedge said wager based upon predetermined criteria; and

hedging said wager in accordance with said determination.

27. The method of claim 26 wherein said predetermined criteria includes a measure of other wagers placed by other clients.

28. The method of claim 26 wherein said predetermined criteria includes past performance of said client.

29. The method of claim 26 wherein said amount is greater than zero.

30. A method of real-time interactive wagering on event outcomes, said method comprising:

receiving a request from a client to wager on an event outcome on which said client is authorized to wager;

determining an amount said house has at risk based upon said requested wager and wagers made by other clients;

determining whether said amount at risk exceeds a predetermined amount; and

hedging automatically said amount at risk in accordance with whether said amount at risk exceeds said predetermined amount.

31. The method of claim 30 wherein said hedging comprises completing at least one transaction in a correlated market.

32. The method of claim 30 wherein said event outcome has a spread associated therewith and said hedging comprises increasing said spread of said event outcome.

33. The method of claim 30 wherein said hedging comprises limiting future authorized wagers to only bids or offers for said wagered event outcome.

34. A method of real-time interactive wagering on event outcomes, said method comprising:

determining a spread of a wagerable event outcome;

displaying at a workstation said wagerable event outcome and said spread of said wagerable event outcome;

receiving a request to wager on said wagerable event outcome;

notifying substantially immediately whether said wager has been accepted; and

adjusting continually said spread of said wagerable event in accordance with predetermined risk criteria.

35. The method of claim 34 wherein said risk criteria comprises a measure of past performance of a client wagering on said wagerable event.

36. The method of claim 34 wherein said risk criteria comprises a measure of other wagers placed on said wagerable event.

37. The method of claim 34 wherein said risk criteria comprises a measure of the volatility of a market.

38. The method of claim 34 wherein said wagerable event is associated with a market and said spread is further adjusted in accordance with a measure of the current direction of said market.

39. A method of real-time interactive wagering on event outcomes, said method comprising:

qualifying a client to participate in wagering;

receiving a request from said client to wager on an event outcome, said event outcome being associated with a data and a market, wherein a price for said event outcome for said date is unavailable from said market;

calculating said price for said event outcome in accordance with available market information; and

displaying to said client said calculated price.

40. The method of claim 39 wherein said calculated price is determined in accordance with at least one of the following criteria:

a price associated with said event outcome having a date other than said date of said event outcome;

a price associated with another event outcome having a date other than said date of said event outcome;

a price associated with another event outcome having a market other than said market of said event outcome;

a price associated with another wager wherein said other wager was made substantially recently; and

carrying-costs associated with said requested wager.

41. A method of real-time interactive wagering on event outcomes, said method comprising:

qualifying a client to participate in wagering;

receiving from said client instructions defining a maximum amount said client desires to risk;

receiving from said client a request to wager on an event outcome on which said client is authorized to wager; and

warning said client when said requested wager and other wagers of said client exceed said maximum amount.

42. The method of claim 41 further comprising:

receiving from said client instructions to reject wagers exceeding said maximum amount; and

rejecting said wager request when said requested wager and other wagers of said client exceed said maximum amount.

43. A method of real-time interactive wagering on event outcomes, said method comprising:

qualifying a client to participate in wagering;

receiving from said client instructions defining a wagering limit; and

preventing said client from further wagering when said wagering limit has been met.

44. The method of claim 43 wherein said wagering limit includes a maximum amount said client is permitted to wager.

45. The method of claim 43 wherein said wagering limit includes a maximum amount said client is permitted to lose.

46. A method of real-time interactive wagering on event outcomes, said method comprising:

receiving from a client instructions defining a wagering limit;

receiving from said client a request to wager on an event outcome;

calculating a total wagering amount for said client based upon said requested wager and other wagers made by said client; and

notifying said client substantially immediately when said total wagering amount exceeds said wagering limit.

47. A method of real-time interactive wagering on event outcomes, said method comprising:

displaying to a client a first display comprising a selection of event outcomes on which said client is authorized to wager;

receiving from said client a request to wager on an event outcome;

calculating a total wagering amount for said client based upon said requested wager and other wagers made by said client; and

displaying to said client a second display comprising a non-wagering environment when said total wagering amount exceeds a predetermined wagering limit.

48. The method of claim 47 wherein said predetermined wagering limit is determined in accordance with instructions received from said client.

49. A method of real-time interactive wagering on event outcomes, said method comprising:

receiving from a client instructions defining a loss limit;

calculating a total loss amount for said client in response to said client losing a wager, said total loss amount based upon said lost wager and other wagers lost by said client; and

notifying said client substantially immediately when said total loss amount exceeds said loss limit.

50. A method of real-time interactive wagering on event outcomes, said method comprising:

issuing a card to a client, said card encoded with identification information and financial information associated with said client;

reading said encoded information from said card;

displaying to said client a selection of wagerable event outcomes on which said client is authorized to wager in accordance with said encoded information;

receiving a request from said client to wager on one of said selection of wagerable event outcomes;

notifying said client substantially immediately whether said wager has been accepted; and

updating on said card said financial information.

51. A method of real-time interactive wagering on event outcomes, said method comprising:

issuing a card to a client, said card encoded with identification information and financial information associated with said client;

reading said encoded information from said card;

updating a financial information record associated with said client in accordance with said encoded information read from said card, said financial information record stored within a data processing computer;

displaying a selection of wagerable event outcomes on which said client is authorized to wager in accordance with said encoded financial information;

receiving a request from said client to wager on one of said selection of wagerable event outcomes;

notifying substantially immediately whether said wager has been accepted;

updating said financial information record associated with said client; and

updating on said card said financial information.

52. A method of real-time interactive wagering on event outcomes, said method comprising:

providing a selection of wagerable event outcomes;

receiving a request from a client to wager on an event other than one of said selection of wagerable event outcomes;

analyzing whether said requested event outcome should be offered as a wagerable event outcome;

establishing price and spread for said requested event outcome in response to a favorable analysis of said requested event; and

adding said requested event outcome to said selection of wagerable event outcomes in response to said favorable analysis.

53. The method of claim 52 further comprising notifying said client of said new wagerable event outcome.

54. The method of claim 52 further comprising notifying another client of said new wagerable event outcome.

55. A method of real-time interactive wagering on event outcomes, said method comprising:

qualifying a client for wagering;

providing a selection of wagerable event outcomes;

receiving a request from a client to wager on an event outcome other than one of said selection of wagerable event outcomes;

adding said requested event outcome to said selection of wagerable event outcomes.

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