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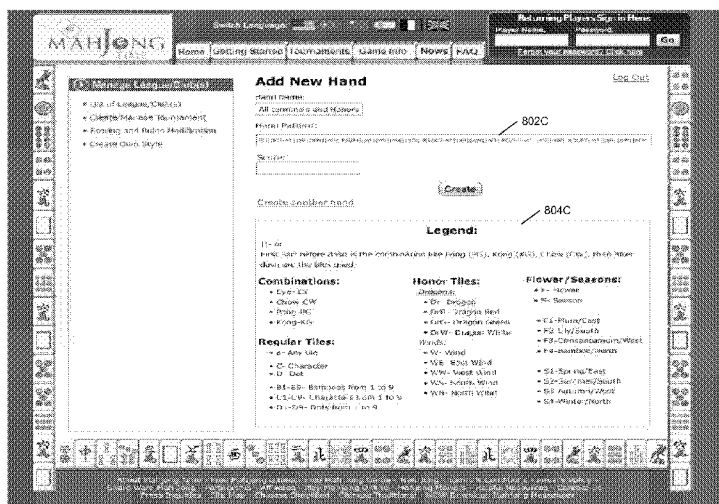
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(57) Abstract: Systems and methods for operating an online gaming environment are described. Certain embodiments include systems and methods for creating a customized rule set in accordance with instructions received by one of a plurality of players. Other embodiments include systems and methods for monitoring collusion between two or more players that are using the online gaming environment. Additional embodiments include systems and methods for employing automated players to advance operations of a game hosted by the online gaming environment. Alternative embodiments include systems and methods for archiving a portion of a game and permitting a user of the online gaming environment to view the archived portion of the game.

COMPUTER-BASED GAMING SYSTEM AND METHOD FOR CUSTOMIZING GAME PLAY

PRIORITY

[1001] The present application claims priority under 35 U.S.C. 119(e) to U.S. Provisional application no. 60/821,501 entitled "Computer-Based Gaming System," filed on August 4, 2006. The present application also claims priority under 35 U.S.C. 119(e) to U.S. Provisional application no. 60/913,992 entitled "Computer-Based Gaming System," filed on April 25, 2007.

CROSS-REFERENCE TO RELATED APPLICATIONS

[1002] This application relates to and incorporates by reference U.S. Provisional application no. 60/821,501 entitled "Computer-Based Gaming System," filed on August 4, 2006. The present application also claims priority under 35 U.S.C. 119(e) to U.S. Provisional application no. 60/913,992 entitled "Computer-Based Gaming System," filed on April 25, 2007.

FIELD OF THE INVENTION

[1003] The invention relates to systems and methods for operating an online gaming environment. In particular, but not by way of limitation, aspects of the invention relate to creating a customized rule set in accordance with instructions received by one of a plurality of players, monitoring collusion between two or more players that are using the online gaming environment, employing automated players to advance operations of a game hosted by the online gaming environment, and archiving a portion of a game for subsequent viewing by a user of the online gaming environment.

BACKGROUND OF THE INVENTION

[1004] Online gaming offers a variety of game play options that enhance a user's gaming experience. The variety of game play options may include options for creating a game. Typical systems, methods and computer readable instructions for creating a game are rudimentary, allowing a user to select a type of game (e.g., poker, Mahjong, etc.) that operates with respect to predetermined rules. Unfortunately, these previous systems, methods

and computer readable instructions for creating a game are inadequate with respect to rule customization and creation. For example, typical Mahjong game play options allow a user to select a particular set of established Mahjong rules (e.g., Chinese Traditional, Hong Kong, Japanese, or American) that will govern game play. Typical game play options do not adequately provide a user with an option to modify the particular set of rules, nor do they give the user an option to create a set of rules that are unique from established sets of rules.

SUMMARY OF THE INVENTION

[1005] Exemplary embodiments of the invention that are shown in the drawings are summarized below. These and other embodiments are more fully described in the Detailed Description section. It is to be understood, however, that there is no intention to limit the invention to the forms described in this Summary of the Invention or in the Detailed Description. One skilled in the art can recognize that there are numerous modifications, equivalents and alternative constructions that fall within the spirit and scope of the invention as expressed in the claims.

[1006] The invention generally relates to systems and methods for operating an online gaming environment. The online gaming environment may include any number of games, including variations of Mahjong. In certain embodiments, the systems and methods create one or more customized rule sets in response to receiving instructions from one of a plurality of players. The instructions may, for example, indicate an existing or newly-created rule for inclusion in the customized rule set.

[1007] In other embodiments, the systems and methods monitor collusion between two or more players that are using the online gaming environment. When monitoring for collusion, the systems and methods may review a first play from a first player to determine whether the first player made the first play in collusion with a second player. The systems and methods may alternatively check if a first identification of a first player relates to a second identification of a second player to determine that the first player is playing in collusion with the second player.

[1008] In some embodiments, the systems and methods advance operations of game using an automated "robot" player. When using an automated player, the systems and methods may determine a winning combination of game pieces that the automated player will attempt to achieve during game play. The systems and methods may additionally determine

whether the automated player should acquire and/or discard particular game pieces. In some embodiments, the systems and methods make suggestions to real players based on plays the automated player would make under similar circumstances.

[1009] In alternative embodiments, the systems and methods archive a portion of a game and permit a user of the online gaming environment to view the archived portion of the game. The systems and methods may also provide commentary related to the portion of the game. The commentary may be derived by another user of the online gaming environment or by a computer algorithm of the online gaming environment.

BRIEF DESCRIPTION OF THE DRAWINGS

[1010] The foregoing summary of the invention, as well as the following detailed description of illustrative embodiments, is better understood when read in conjunction with the accompanying drawings, which are included by way of example, and not by way of limitation with regard to the claimed invention.

[1011] FIGURE 1 illustrates an example of a suitable gaming system environment in which the invention may be implemented;

[1012] FIGURE 2 illustrates a diagram depicting a program module hierarchy in accordance with an exemplary embodiment of the invention;

[1013] FIGURE 3 shows a flow chart of an illustrative method for becoming a spectator at a game in accordance with one aspect of the invention;

[1014] FIGURE 4 shows a flow chart of an illustrative method for requesting to view a player's hand during an in-progress game in accordance with one aspect of the invention;

[1015] FIGURE 5 shows a flow chart of an illustrative method for starting a game or creating a mini tournament in accordance with one aspect of the invention;

[1016] FIGURE 6 shows a flow chart of an illustrative method for inviting other users to join a game in accordance with one aspect of the invention;

[1017] FIGURE 7 each show a flow chart of an illustrative method for operating a "robot" player in accordance with one aspect of the invention;

[1018] FIGURES 8A-C each depict a web page that represents one graphical implementation of the invention;

[1019] FIGURE 9 shows a flow chart of an illustrative method for managing an email delivery scheme for new members in accordance with one aspect of the invention;

[1020] FIGURE 10 shows a flow chart of an illustrative method for logging in to an online gaming environment in accordance with one aspect of the invention; and

[1021] FIGURE 11 shows a flow chart of an illustrative method for monitoring unfair game play in accordance with one aspect of the invention.

DETAILED DESCRIPTION

[1022] In the following description of various illustrative embodiments, reference is made to the accompanying drawings, which form a part hereof, and in which is shown by way of illustration various embodiments in which the invention may be practiced. It is to be understood that other embodiments may be utilized, and structural and functional modifications may be made without departing from the scope of the invention.

[1023] FIGURE 1 illustrates an example of a suitable gaming system environment 100 on which the invention may be implemented. The gaming system environment 100 is only one example of a suitable computing environment and is not intended to suggest any limitation as to the scope of use or functionality of the invention. Neither should the gaming system environment 100 be interpreted as having any dependency or requirement relating to any one or combination of components illustrated in the exemplary gaming system environment 100.

[1024] The invention may be described in the general context of computer-executable instructions, such as program modules, being executed by a computer or server. Generally, program modules include routines, programs, objects, components, data structures, and the like that perform particular tasks or implement particular abstract data types. The invention may also be practiced in distributed computing environments where tasks are performed by remote processing devices that are linked through a communications network. In a distributed computing environment, program modules may be located in both local and remote computer storage media including memory storage devices.

[1025] With reference to FIGURE 1, an exemplary system for implementing the invention includes a general-purpose host site 110. Components of host 110 may include, but not by way of limitation, an archive server 111, a chat server 112, a game server 113, a tournament server 114, a reporting server 115, a game analysis server 116 and a database server 117. The components of host 110 are coupled to each other via a bus, a wired or wireless network, or various other methods known in the art.

[1026] The host 110 may operate in a networked environment using one or more of various communication network(s) 120 known in the art. By way of example only, the communication network(s) 120 may include the Internet or a private network that allow for communication between host 110 and one or more remote and local client terminal(s) 130. Client terminal(s) 130 may include, but not by way of limitation, a computer 131, a personal digital assistant (PDA) 132, a cell phone 133, a television (TV) 134, a game console 135, or any other device configured to send or receive data to or from the host 110. In an exemplary embodiment, client terminal(s) 130 interface to host 110 without installing or downloading software (e.g., via standard web browsers). Alternatively, client terminal(s) 130 may interface to host 110 after installing or downloading software, resulting in faster processing speeds.

[1027] Embodiments of the invention are directed to online gaming environments in general. An exemplary embodiment of the invention is directed to an online gaming environment that supports Hong Kong Mahjong and associated games according to various standards which have been promulgated in, for example, China, the United States, Japan, Taiwan, the Philippines, and Korea. One of skill in the art will appreciate various embodiments of the invention, wherein game play is available to internationally and in multiple languages. One of skill in the art will further appreciate that embodiments of the invention may be applied to online gaming environments that support games other than Mahjong, including card games (e.g., poker) and versions of board games (e.g., Monopoly), among others.

[1028] FIGURE 2 illustrates a diagram depicting a program module hierarchy instantiated within some or all servers 111-117 of host 110 in accordance with an exemplary embodiment of the invention. As shown, FIGURE 2 depicts a Lobby module 210 comprising three sub-modules: a Chat sub-module 220; a Statistics sub-module 230; and a

Game sub-module 240. The Game sub-module 240 comprises four sections: a User section 241; a Table section 242; a Tournament section 243; and a League/Club section 244.

[1029] FIGURE 2 also depicts an Administrator module 260 that comprises four sub-modules: a Payment Manager sub-module 261; a User Manager sub-module 262; a Reporting Console sub-module 263; and a Tournament Manager sub-module 264.

[1030] In several embodiments of the invention, one or more of servers 111-117 cooperatively operate functions of the Lobby module 210 and the Administrator module 260. In one implementation of the invention, servers 111-113 cooperatively operate functions of the Lobby module 210. For example, the Chat server 112 operates functions of the Chat sub-module 220, the Archive server 111 operates functions of the Statistics sub-module 230 and the Game server 113 operates functions of the Game sub-module 240. In the same implementation, servers 113-115 cooperatively operate the Administrator module 260. For example, the Game server 113 operates functions of both the Payment Manager sub-module 261 and the User Manager sub-module 262, the Reporting server 115 operates functions of the Reporting Console sub-module 263, and the Tournament server 114 operates functions of the Tournament Manager sub-module 264. One of skill in the art will appreciate alternative configurations that result in one or more different servers operating functions of any one of the sub-modules 220-250 and 261-264.

[1031] The Lobby module 210 generates information that is sent to a client terminal 130 and presented to a user of the client terminal 130 via a user interface screen (not shown) immediately after the user successfully connects with host 110 (e.g., upon the user logging in to host 110).

[1032] The Chat sub-module 220 is configured to display public and private messages on the screens of client terminal(s) 130. These messages may be typed by users of client terminal(s) 130 or generated by host 110. One of skill in the art will recognize that the messages can be displayed by any number of methods known in the art including, for example, one or more chat windows and ICQ messaging.

[1033] The Chat sub-module 220 is further configured to provide one or more means for a user to receive messages and type a public or private message for display on the screens of one or more other users. In one embodiment, a user is able to select one or more other users and subsequently send them a message. In another embodiment, a user receives a

message generated by host 110 that alerts the user to the availability of a game managed by host 110. One of skill in the art will appreciate various alternatives to the sending and receiving of messages outlined above with respect to the Chat sub-module 220.

[1034] The Chat sub-module 220 is configured with scrolling capability, allowing the user to scroll up or down in a chat window to view the messages that previously were not displayed in the chat window. Additionally, the Chat sub-module may be configured to display certain messages using one of a plurality of display formats. For example, an announcement message generated by host 110 may be displayed in a different color, font, and size than a message sent from another user at another one of the client terminal(s) 130.

[1035] The Chat sub-module 220 may be further configured to provide several functionalities to a user after the user “clicks” on the username of another user who sent a message, or on the message itself. In one embodiment, the Chat sub-module 220 may provide the user with the option to view the other user’s information, join a game served by the other player, or watch a game played by the other player. In another embodiment, a user may invite the other user to join a game the user is serving, or to a private chat session. In yet another embodiment, a user can add the other user to a list of friends.

[1036] The Statistics sub-module 230 is configured to track and display various announcements, statistics, and news related to activities associated with host 110. For example, the Statistics sub-module 230 may be configured to display the schedule(s) of one or more current or future tournaments, the results of previous tournaments, the payout of one or more tournaments and the rankings of a subset or all of the total users supported by host 110.

[1037] The Game sub-module 240 is configured to manage game play for user(s) at the client terminal(s) 130 connected to host 110. The Game sub-module 240 comprises four sections: a User section 241, a Table section 242, a Tournament section 243, and a League/Club section 244.

[1038] The User section 241 is configured to store, track and display representations of user information (e.g., user activity, among others). Storage of such user information may occur at any database connected to or contained within the host 110. Representations of such user information may include an indication of users who are online at any given time, as well as accompanying information unique to each user.

[1039] The display of user information may take form in an icon format, a list format or any other suitable format for displaying the representations. Displayed user information may include a username, a picture selected by a specific user, a user's rank, a user's rating, a user's credit level, a user's money level, a user's address, and a user's full name. Additional user information may include one or more indications of the "friends" of a user who are online at any given time. Display of the friend indications may take form in an icon format, a list format or any other suitable format for displaying the indications.

[1040] By way of example, a rating system similar to the Chess FIDE rating system may be used to determine a user's rating. A user may start with a predetermined point level (e.g., 1000). Additional points are earned by beating another user, the amount of which may depend on the rating of that other user. Points are lost by losing to another user, the amount of which may depend on the rating of that other user. In other embodiments, users can lose points for beating lower rated users by less than a defined amount. Alternatively, users can gain points for losing to higher rated users by a qualified slim margin. In one embodiment, each user's rating is graphically represented on display screens of client terminal(s) 130 via a belt system like that used in the martial arts. For example, the graphic representation of low-rated and high-rated users would be a yellow belt and a black belt, respectively.

[1041] The User section 241 may be further configured with filtering functionality that enables a user to filter the display of user information. For example, the filtering functionality may allow a user to filter a list of online users by rank, rating, and a "friends only" setting that will only display other users that have a friend status indication previously set by the user.

[1042] The User section 241 may be further configured to allow users to update their personal account by removing friends, upload pictures or files, change contact information, deposit money for subsequent game play or to pay a negative balance, cash out a positive balance and adjust sound and display settings. The User section 241 may be further configured to provide users with access to facts and questions (FAQ), tutorials, listings of rules, agreement terms, and customer service contact information.

[1043] The User section 241 may also list saved/archived games and allow users to select any of the saved games for subsequent review. In one embodiment, review of the saved games may include a replay of at least a portion of the saved game with or without

pause, stop, play, fast forward, and rewind capability. In another embodiment, review of the saved games may include replay of the saved game with additional analysis provided to the user(s) via a text, audio and/or video format. The additional analysis may be formed by algorithms operating in host 110 or in client terminal(s) 130 that determine potential strategies employed by one or more players during the saved games. Such a determination would attempt to explain why a specific move was made during the saved games. The additional analysis may alternatively be provided by a commentator (i.e., not an algorithm) who previously reviewed the saved games, watched the original games, or participated in the original games. One of skill in the art will appreciate that the commentary may be recorded and provided to users after the recording, or that the commentary may be provided to the users while the commentary is in the process of being created (i.e., in “real time”). One of skill in the art will also appreciate that analysis of game play may occur during game play in real time.

[1044] By way of example, the analysis of game play may include display of possible winning hands with respect to one or more hands of one or more players at any time during the game play. Additionally or alternatively, the analysis may include display of a recommendation for acquiring or not acquiring a game piece available to a player, display of the stages of the game, and/or display of a recommendation for discarding a game piece. Display of the recommendation for discarding a game piece may include display of a recommendation that the game piece is needed to achieve a particular winning combination.

[1045] The Table section 242 comprises an All Tables sub-section 242a, an Open Tables sub-section 242b, and a Create-A-Table sub-section 242c. One of skill in the art will appreciate that embodiments pertaining to the Table section 242 may be implemented in similar form with respect to the Tournament section 243 and the League/Club section 244, both of which are described in more detail below.

[1046] The All Tables sub-section 242a is configured to store, track and display an indication of all the games at any given time that are available to or being used by any number of users. The Open Tables sub-section 242b is configured to store, track and display an indication of all the games at any given time that may be joined by one or more users.

[1047] The display of game indications may take form in an icon format, a list format or any other suitable format for displaying the indications. An icon format may display a

graphic representation of a table, including table positions that are occupied by users or available for occupation by users, a name of the game, and an indication of whether the game play is rated or non-rated (i.e., whether the game will effect a participating user's rating). For each user occupying a position at the table, the icon format may display unique user information (e.g., a color that identifies a user's rank or rating). A list format may display information similar to that displayed with respect to the icon format.

[1048] The display of game indications may be filtered to display information based on the type of game play, the length of time a game has been open, whether the game can be watched, and the name of the game, among others.

[1049] A user may select a particular game indication and then proceed to join the game as a player (i.e., occupy a table position), watch the game as a spectator, or perform some other action within both the scope and the spirit of the invention.

[1050] FIGURE 3 shows a flow chart of an illustrative method for becoming a spectator at a game in accordance with one aspect of the invention. At step 302, a user makes a request to become a spectator at a specific game or tournament. The host 110 determines, at step 304, whether the requesting user has permission to be a spectator. For example, host 110 might check whether the game settings prevent spectators. If the game settings prevent spectators, host 110 displays a message to the requesting user that his or her request to watch the game has been declined (step 306). If the game settings do not prevent spectators, host 110, at steps 308-310, allows the user to view the game, lists the user as a spectator, and sends a message pertaining to the spectator to at least one participant in the game. In one embodiment, host 110 allows the at least one participant to protest or decline spectator privileges previously given to the requesting user. After receiving spectator privileges, the requesting user can leave the table and, at step 318, save the game for subsequent review.

[1051] When a user joins a game as a player, host 110 allows the user to choose whether a spectator can view the user's hand. In one embodiment, the participant can choose to allow all spectators, approved spectators, or no spectators to view his or her hand. FIGURE 4 shows a flow chart of an illustrative method for requesting to view a player's hand during an in-progress game in accordance with one aspect of the invention. At step 402, a spectator of a game requests to view a hand of a player in the game. The host 110 determines, at step 404, whether the player retains the right to approve or decline a request

before the requesting spectator can view the player's hand. If the player does not retain such a right and has previously selected to allow all spectators to view the player's hand, then host 110 grants viewing access to the spectator at step 408. If the player has previously chosen not to allow any spectators to view his or her hand, host 110 restricts viewing access from the spectator and displays a message to the spectator that his or her request to view the player's hand was declined (step 410). If the player retains an approval right, host 110 displays a request for approval at the player's client terminal (step 406). The player then chooses to either approve or decline the spectator's request. If the player approves the request, host 110 grants viewing access to the spectator at step 408. If the player declines the request, host 110 restricts viewing access from the spectator and displays a message to the spectator that his or her request to view the player's hand was declined (step 410). A player may want to decline a viewing request if the player suspects that the requesting spectator is affiliated with another player at the table and is therefore attempting to reveal the player's hand to the other player.

[1052] The Create-A-Table sub-section 242c may be used by a user to create a table for use by the user and other users. By way of example, FIGURE 5 depicts a flow chart of an illustrative method for creating a table in accordance with one aspect of the invention. At step 502, a user initializes a game by creating a virtual table. After creating a virtual table, the user sets an entrance fee amount and various other settings if applicable (step 504). Other settings may include whether the game is rated versus non-rated, whether a time limit will govern player moves, whether spectators (i.e., users who watch the game) are allowed, whether the user must approve other users before they can become a player, whether certain game pieces are used (e.g., flower tiles), whether the game restricts certain user ratings or rankings, and whether to name the game, among others. Additionally, the user may set the seating order and rotation of players at the table, a number of rounds, a number of players, a dealing sequence, and a number of game pieces, among others.

[1053] If the user sets an entrance fee, host 110 determines, at step 506, whether the user has sufficient funds to pay the entrance fee. If the user does not have sufficient funds, host 110 allows the user to deposit a sufficient amount of funds (step 508). After host 110 determines that the user has sufficient funds, or after the user sets an entrance fee of zero, the user waits for other users to join the game at step 910. The user continues to wait until a sufficient amount of other users join the game. After a sufficient amount of other users join the game, at step 912, the game starts. The sufficient amount of other users may vary

depending on the embodiments of the invention. In one embodiment, the table must be comprised of actual users. In another embodiment, one or more “robot” players (e.g., automated players controlled by an algorithm run by the host 110) can fill one or more open seats at a game table.

[1054] A user may also invite other users to join a game. By way of example, FIGURE 6 shows a flow chart of an illustrative method for inviting other users to join a game in accordance with one aspect of the invention. At step 602, a user invites other users to join a game. Such an invite may be possible when the user selects prospective players (i.e., the other users) via a listing of users currently online, and then host 110 sends an invitation, at step 604, to each of those prospective players. When a prospective player accepts the invitation, he or she takes a seat at the game table (step 606). When a prospective player declines the invitation, host 110 displays a message to the user who originated the invitation that his or her invitation to join the game was declined (step 608).

[1055] As previously mentioned above, a “robot” can fill one or more open seats at a game table in accordance with certain embodiments of the invention. In accordance with certain embodiments of the invention, a “robot” may join a game while the game is in progress. For example, one or more players who occupy a position at a table/game may potentially leave the game before it is completed. In such a case, the “robot” will occupy the position of the exiting player(s) until the game reaches completion. In some embodiments, the player(s) may be allowed to return before the end of the game and reoccupy their previous position. In other embodiments, the player(s) may not be allowed to return once control of their hand(s) is relinquished to the “robot.”

[1056] By way of another example, a player may exceed a time limit allotted to the player for making a play, and the host 110 will momentarily take control of the player’s hand to make a play for the player. Upon joining a game in accordance with any of the above-mentioned scenarios, a “robot” will rely on one or more computer algorithms to determine appropriate plays.

[1057] By way of example, FIGURE 7 shows a flow chart of an illustrative method for operating a “robot” player in accordance with one or more aspects of the invention. As shown in step 702, the host 110 determines a winning combination of game pieces (e.g., tiles, cards) of which the robot will attempt to achieve during game play. During step 702, the host

110 compares the robot's current set of game pieces against stored representations of winning combinations of game pieces to determine a list of n winning combinations of which the robot player can achieve.

[1058] The host 110 may also consider, when determining the list of n winning combinations, any game pieces that are both available and unavailable to the robot. For example, the host 110 may consider that a particular game piece needed for a winning combination has not been previously discarded, played or acquired by another player, and is therefore available to the robot for forming a winning combination. Alternatively, the host 110 may consider that a particular game piece was previously discarded, played or acquired by another player, and is therefore no longer available to the robot for forming a winning combination. The host 110 may also consider that a particular game piece has been previously discarded or played by the robot when determining availability or unavailability of that game piece. When forming the list of n winning combinations the host 110 may eliminate from consideration any winning combination that the robot cannot achieve due to unavailability of one or more game pieces.

[1059] The host 110 may also sort the list of n winning combinations based on various criteria. For example, the list may be sorted based on number of game pieces needed by the robot to achieve the winning combination. Under such a scenario, if the robot needs only one game piece to achieve a first winning combination and needs two game pieces to achieve a second winning combination, then the host 110 may list, in the list of n winning combinations, the first winning combination higher than the second winning combination.

[1060] By way of another example, the list may be sorted based on score value of each winning combination. Under such a scenario, a first winning combination worth x points may be listed higher than a second winning combination worth y points if x is greater than y .

[1061] By way of yet another example, the list may be sorted based on historical data showing win rates per winning combinations. A win rate may be, for example, a percentage of winning hands that were achieved using a specific winning combination during n games or over m time units (e.g., minutes, days, months, years). Under such a scenario, a first winning combination that has a win rate of seventy percent may be listed higher than a second winning combination that has a win rate of two percent. Accordingly, the host 110 lists common winning combinations higher than less common winning combinations.

[1062] One of skill in the art will appreciate the various sorting techniques known in the art at the time of the invention. After the list of n winning combinations is formed and sorted, the host 110 may elect, on behalf of the robot, the winning combination listed at the top of the list.

[1063] At step 704, the host 110 determines whether the robot should acquire a discarded game piece. During step 704, the host 110 compares the discarded game piece against the elected winning combination from step 702 and against the game pieces already in the robot's possession. If the game piece matches a game piece needed to achieve the winning combination and if the acquisition of the game piece would not unnecessarily duplicate a game piece in the robot's hand, then the host 110 may elect to acquire the game piece.

[1064] If the game piece is not needed to achieve the elected winning combination, the host 110 may temporarily add the game piece to the robot's hand and perform the method described above with respect to step 702 in order to determine a temporary winning combination for potential election by the host 110. If the temporary winning combination is the same as the elected winning combination, the host 110 may elect to not acquire the discarded game piece. If the temporary winning combination is different than the elected winning combination, the host 110 may elect to acquire the discarded game piece.

[1065] At step 706, the host 110 determines which game piece from the robot's hand to discard. During step 706, the host 110 determines which game pieces are unnecessary for forming the elected winning combination, and adds all of them to a "safe to discard" list. The host 110 then compares those "safe to discard" game pieces that were added to the "safe to discard" list against game pieces that are held by, available to and/or unavailable to other players. During the comparison step, the host 110 may determine that a particular "safe to discard" game piece, if discarded, may benefit other player(s). If such a determination is made, that "safe to discard" game piece may be removed from the "safe to discard" list. One of skill in the art will appreciate various techniques known in the art at the time of the invention that allow the host 110 to determine when the discarding of a particular game piece may benefit other player(s). For example, if there are n or more game pieces similar or identical to a "safe to discard" game piece that are unavailable to the other player(s), then the host 110 may determine that the game piece should remain on the "safe to discard" list.

[1066] If at least one game piece is listed in the “safe to discard” list, the host 110 may elect to discard a game piece from the list at random. If no game piece is listed in the “safe to discard” list, the host 110 may elect to discard a game piece based on a probability that the game piece will benefit other player(s) and/or the robot. The host 110 may elect to discard, among two or more game pieces, a game piece that has the lowest probability of benefiting other player(s). Alternatively, the host 110 may elect to discard a game piece that has the lowest probability of benefiting the robot. The probabilities discussed above may be determined based on any number of factors, including the stage of the game, game pieces held by other player(s), game pieces available to and/or unavailable to other player(s), game pieces held by the robot and game pieces available to and/or unavailable to robot. One of skill in the art will appreciate methods known in the art for determining the probabilities discussed above.

[1067] One of skill in the art will also appreciate various other approaches known in the art for determining which game piece to discard. By way of example, in a game of Mahjong the host 110 may determine the stage of the game and then use that determination to elect a tile to discard. If, for example, the stage is at less than eight player turns, the host 110 may elect to discard a tile that has most exposure, followed by wind, and dragon tiles. If the stage is at more than eight player turns, the host 110 may elect not to discard wind and dragon tiles, as well as any tiles that are not visible among the discards & exposures.

[1068] One of skill in the art will appreciate that the method described above with respect to any of the steps 702-706 may be modified while keeping within the spirit and scope of the invention. In step 706, for example, unnecessary game pieces may be analyzed/compared to other game pieces before being placed in the “safe to discard” list. Those unnecessary game pieces that may benefit other player(s) would not be placed in the list and then removed.

[1069] One of skill in the art will also appreciate that the method described above with respect to any of the steps 702-706 may be used to instruct a non-robot player to make a particular move based on, for example, a winning combination at the top of a list of n winning combinations that are achievable by that non-robot player and based on a “safe to discard” list.

[1070] One of skill in the art will further appreciate that the method described above with respect to any of the steps 702-706 may be performed throughout the game and in any order. Accordingly, the winning combination elected by the host 110 may change depending on game play by the robot and/or game play by players (e.g., discarding, playing or acquiring particular game pieces by the robot or players), and the game pieces listed in the “safe to discard” list may change depending on the winning combination elected by the host 110 and/or depending on game play by the robot and/or game play by players (e.g., discarding, playing or acquiring particular game pieces by the robot or players).

[1071] An additional aspect of the invention allows a user to play multiple games at once. In one embodiment, host 110 will form a graphical interface on the user’s screen that alerts a user when it is their turn to make a play in a specific one of the games that the user is currently playing. For example, the interface may comprise multiple tabs that the user can “click” on to access a specific game. A tab may blink to alert a user that his or her turn is active in the game associated with the tab. The user can then “click” on the tab to quickly access the game. One of skill in the art will recognize alternative embodiments for allowing a user to play multiple games simultaneously and for alerting a user when his or her turn is active. For example, instead of tabs, the games may be presented in various windows, and alerts may appear as pop-up messages or voice messages.

[1072] The Tournament section 243 comprises an All Tournaments sub-section 243a, an Open Tournaments sub-section 243b, and a Create-A-Tournament sub-section 243c. The operation of each sub-section of the Tournament section 243 is similar to the operation of each sub-section of the Table section 242. For example, users may join, watch, create or manage a tournament via a similar method in which users may join, watch, create or manage a game/table. In order to avoid duplication, Applicant notes that aspects described above with respect to the Table section 242 can be implement in similar form with respect to the Tournament section 243.

[1073] The Tournament section 243 operates various types of tournament formats, including “Winner Takes All,” “Two Players Advanced Per Table,” and “Double Elimination” formats, among others. In some embodiments, users may collect a prize (e.g., money, game credits, etc.) after placing in a tournament (e.g., winning the tournament, placing in the top three, etc.). In other embodiments, users may earn commission (e.g., money, game credits, etc.) by hosting tournaments.

[1074] Users who wish to create a tournament may do so after selecting tournament settings. Such settings may include a tournament name, a type of tournament format, a style of play (e.g., Chinese Official, Hong Kong, American Style, Japanese Modern, Taiwanese Style, Zung Jung Rules, or modifications thereof), an entry fee amount, a number of tables, a number of rounds, a start date and time, a minimum player rating, a minimum points level to declare Mahjong, a time limit per move, a prize distribution, a commission amount, a number of winners, whether to allow spectators and whether to show the winning hand, among others.

[1075] The Tournament section 243 stores, tracks and displays various types of information, including information related to tournament schedules for any given time period, a status of any displayed tournaments (e.g., completed, in-progress, start in 'x' months/days/hours/minutes/seconds, etc.), and a representation of each table associated with a tournament, among others.

[1076] The League/Club section 244 comprises an All Leagues sub-section 244a, an Open Leagues sub-section 244b, a Create-A-League sub-section 244b, and a Manage-A-League sub-section 244c. The operation of each sub-section 244a-c of the League section 244 is similar to the operation of each sub-section 243a-c of the Tournament section 243 and each sub-section 242a-c of the Table section 242. For example, users may join, create or manage a league via a similar method in which users may join, create or manage a tournament or a table. In order to avoid duplication, Applicant notes that aspects described above with respect to the Table section 242 and the Tournament section 243 can be implemented in similar form with respect to the League section 244.

[1077] Embodiments of the invention may offer one or more top-level leagues in addition to user-run leagues. The top-level leagues may include American, Canadian, European, Asian and Australian leagues, or any other league developed with respect to regions of players among others. Individual users, or groups of users, may also take part in management of these top-level leagues. Each user-run or top-level league may operate in association with an existing style of play, including Chinese Official, Hong Kong, American Style, Japanese Modern, Taiwanese Style and Zung Jung Rules.

[1078] The League section 244 allows users to create and manage their own league by creating/managing tournaments, individual tables, league membership (e.g., inviting,

adding or removing members) or correspondence to league members (e.g., chat rooms, emails, electronic postings). Users may earn commission (e.g., money, game credits) by hosting tournaments and securing membership from other users. For example, a league creator may earn commission on a total entry fee collected from a tournament hosted via the league. Alternatively, the league creator may earn commission on periodic or total fees collected from member subscription by other users.

[1079] Users may create a league by way of various techniques. For example, an interactive, graphical user interface (not shown) may be used by a user to enter a league name, select a league type (e.g., public or private), select a style of play (i.e., a set of rules) and enter a league description. A user may also enter personal information including a name and contact information. Any league may designate a particular style of play. Styles of play may include existing styles, created styles, or modifications of existing styles. Style modifications may include scoring modifications, removal of existing combinations, modification of existing combinations, and addition/creation of a new combinations.

[1080] By way of example, FIGURES 8A-C depict graphical user interfaces 800A-C that are available to users during a style of play modification method in accordance with at least one embodiment of the invention. As shown in FIGURE 8A, the user selects an existing style to modify and provides a name for the modified style. Existing styles include Chinese Official, Hong Kong, American Style, Japanese Modern, Taiwanese Style and Zung Jung styles/rules.

[1081] In FIGURE 8B, the user modifies and/or sets general scoring rules and hand combinations. For example, the user may select whether a "Wind of Rounds Bonus" rule will apply to the modified style by clicking on the box 802B to the left of the rule label 804B. The user may input a score that will be assessed in accordance with the rule in the text box 806B to the right of the rule label 804B. As shown, the user may also assign scores to particular hand combinations. Alternatively, the user may remove a particular hand combination from the style.

[1082] As shown in FIGURE 8C, the user may create new hand combinations. The user names the hand combination, sets the pattern of the hand combination (e.g., sets the game pieces that will be included in the combination), and assigns a score for the hand combination. For example, the user can set the hand pattern via a text box 802C with coding

syntax provided in a legend 804C. The hand pattern selection may include game pieces and particular combinations of those game pieces (i.e., arrangements of the game pieces with respect to each other). Alternatively (not shown), the user may form a new combination by selecting particular game pieces that are graphically displayed. The selection may occur by clicking on the displayed game piece, at which point that game piece is added to the combination. The user can also arrange the game pieces into any combination.

[1083] One of skill in the art will appreciate various rule customizations that are available to users in accordance with certain embodiments of the invention. By way of example, Table 1 below illustrates examples of rule customizations available to users.

Table 1: Listing of example rule customizations available to users.

1. Basic Rules Customizations

- a. Number of tiles to form a winning hand: 5, 8, 11, 12, 14, 15, or 17
note: 5 is Macau Simplificado variants, 8 is Szechuan variants, 11 is Nepalese variants, 12 is Pong variants, 15 is Chinese Archaic variants. 14 and 17 are the most common variants.
- b. Tiles to use:
 - i. Suits: Characters Dots Bamboos
 - ii. Winds: East South West North
 - iii. Dragons: Red Green White
- Dragons are treated as flowers
 - iv. Flowers & Seasons: 4, 8 or 16 Options
If options is clicked, the user should be able to customize the flower options further based upon the items below:
 - Use in game play OR
 - Use as bonus tiles
 - Replacements taken from the dead wall OR from regular wall
 - v. Animal Flowers (4 tiles) *note: used in Singapore variants*
 - vi. Kings & Queens (8 tiles) *note: used in Vietnamese variants*
 - vii. Dora tiles
 - viii. Jokers: 4, 8, or 24 Options
If options is clicked, the user should be able to customize the joker options further based upon the items below:
 - Allow Jokers in Chows
 - Allow Jokers in pairs and as single tiles (only when "allow jokers in chow is checked)
 - Allow maximum of 4 identical tiles in hand
 - Deal jokers between players in dealt hand
 - Accept melded Jokers in completing combination only
 - Auto-assign value of a discarded joker
 - Allow replacing melded jokers with regular tiles
 - Auto-assign unspecified jokers in loser's hand
- c. Number of players: 3 or 4 *note: Malaysian and Korean (possibly) variants are played with 3 players.*
- d. Dead Wall: None, Replenishing, or Exhaustible. Choice of 2 to 40 tiles (increment of 2)
- e. Discards: Hide, Ordered per player, Ordered per discard, or random

2. Pre-Game Rules Customizations

- a. # of Dice to roll: 2 or 3
- b. Seating arrangement: By dice roll or by tile picking
- c. Charleston/Ding Dong Options
If options is clicked, the user should be able to customize the Charleston options further based upon the items below:
 - i. # of Tiles to exchange: 1 or 3 *Note: exchanging of 1 tile is called "Ding Dong"*
 - ii. Exchange during: Every Hand, Every Round or Last Round only.

3. Game Play Customizations

- a. Turns: Counter clockwise or clockwise
- b. Basic Claims:
 - i. Chow: No restrictions, only from previous player (from any on going out), only from previous player (even when going out), only on going out (from any player)
 - ii. Pung: No restrictions, only from previous player (from any on going out), only from previous player (even when going out), only on going out (from any player)
 - iii. Kong: No restrictions, only from previous player (from any on going out), only from previous player (even when going out), only on going out (from any player) Options
If options is clicked, the user should be able to customize the Kong options further based upon the items below:

- Hide concealed Kongs
 - Allow Kong after claiming a discard for a Chow/Pung
 - Accept (Concealed Kongs, Concealed and claimed Kong, All Kongs) as concealed Pungs
 - iv. Sextet (note: only available when Joker tiles are used): No restrictions, only from previous player (from any on going out), only from previous player (even when going out), only on going out (from any player)
 - v. Quintet (note: only available when Joker tiles are used): No restrictions, only from previous player (from any on going out), only from previous player (even when going out), only on going out (from any player)
 - c. Allow claiming a tile for a pair on going out
 - d. Discards:
 - i. Sacred discard: Not used, Traditional, Extended, 1-4-7 Rule, or Absolute
 - Allow sacred discard declaration
 - ii. Missed discard: Not used, Traditional, Extended, Absolute, or Absolute (conditional)
 - iii. Kuikae
 - e. Competitive Claim to win:
 - i. Allow Multiple winners OR
 - Winners pay each other the difference of their scores
 - ii. Best hand wins OR
 - iii. Limit or Special hands wins OR
 - iv. Pair > Pung > Chow OR
 - v. Pung > Chow > Pair OR
 - vi. The player first in turn wins
- 4. Winning / Going Out / Penalties Customizations:**
- a. Deal stays in East when East wins
 - b. Deal passes after a draw
 - c. Pay points after a draw
 - i. Ready hands only ____ points
 - d. Play "Goulash" after a draw
 - e. Minimum Points to win: 0 to 100 (points, han, or doubles) Exceptions
 - i. If the hand has no mixed suits
 - ii. Ignore Flowers and Seasons
 - iii. Ignore Dora Tiles
 - f. Maximum Chows: 0, 1, 2, 3, or 4
 - g. Declaration of Ready Hands: Not used, voluntary, or mandatory
 - i. Penalties for not winning the hand (after ready declaration):
 - No points for the hands OR
 - Penalty ____ points
 - h. Player declaring Faulty Ready pays (if deal not abandoned):
 - i. ____ (% of limits or points) (to each players or from total points)
 - i. East pays and receives doubles
 - j. Penalties:
 - i. Player declaring "wrong mahjong" pays:
 - ____ (% of limit or points) (to each players or from total points)
 - ii. East pays and receives doubles
 - iii. Deal status after "wrong mahjong": abandoned, continues normally, offender can't mahjong during the deal, or offender hand is dead during the deal.
 - iv. Deal passes: if the offender is East, never, or always
 - v. The player making "wrong mahjong" pays the winner:
 - ____ points for each wrong mahjong
 - vi. Allow cancelling of "wrong mahjong"
- 5. Scoring & Payments Customizations:**
- a. **Scoring:**
 - i. Position Based: (can be set for winners and losers)
 - Pung of own Wind ____ (points, doubles, or % of limit)
 - Kong of own Wind ____ (points, doubles, or % of limit)
 - Pung of Wind of the round ____ (points, doubles, or % of limit)
 - Kong of Wind of the round ____ (points, doubles, or % of limit)
 - ii. Bonus Tile Based: (can set for winners and losers)
 - Flower & Season of own Wind ____ (points, doubles, or % of limit)
 - Flower & Season of Wind of the Round ____ (points, doubles, or % of limit)
 - All Flowers & Seasons ____ (points, doubles, or % of limit)
 - No Flowers or Seasons ____ (points, doubles, or % of limit)
 - iii. Mahjong (Winning) Based:
 - Winning ____ (points, doubles, or % of limit)
 - Win on a fully exposed hand ____ (points, doubles, or % of limit)
 - Win on a fully concealed hand ____ (points, doubles, or % of limit)
 - Win on a Chow hand ____ (points, doubles, or % of limit)
 - Win on a Pung hand ____ (points, doubles, or % of limit)
 - Win on a Kong hand ____ (points, doubles, or % of limit)
 - Win on one suit only ____ (points, doubles, or % of limit)
 - Win on the last tile of the Wall ____ (points, doubles, or % of limit)
 - Win on the first discard ____ (points, doubles, or % of limit)
 - Win of the last discard ____ (points, doubles, or % of limit)
 - Win on a supplement tile ____ (points, doubles, or % of limit)
 - Win by robbing a Kong ____ (points, doubles, or % of limit)

- Win on self pick ____ (points, doubles, or % of limit)
 - Win on player's discard ____ (points, doubles, or % of limit)
 - Win on a pair ____ (points, doubles, or % of limit)
 - Bird eats the cake ____ (points, doubles, or % of limit)
 - Win on declaration of ready ____ (points, doubles, or % of limit)
 - Win on declaration of exposed ready ____ (points, doubles, or % of limit)
 - Win on ready on original hand ____ (points, doubles, or % of limit)
 - Win on ready on first turn ____ (points, doubles, or % of limit)
 - Win with no jokers ____ (points, doubles, or % of limit)
 - Winning tile bonus ____ (points, doubles, or % of limit)
 - Dora tile ____ (points, doubles, or % of limit)
 - Ura Dora tile ____ (points, doubles, or % of limit)
 - Kong Dora tile ____ (points, doubles, or % of limit)
 - Kong Ura Dora tile ____ (points, doubles, or % of limit)
 - Red Dora tile ____ (points, doubles, or % of limit)
- iv. Basic Hand Pattern Based: (can be set for winners & losers)

<u>Pattern Name</u>	<u>Melded</u>	<u>Concealed</u>
- <input type="checkbox"/> Pung of Simples	__ pts/dbl	__ pts/dbl
- <input type="checkbox"/> Pung of Terminals	__ pts/dbl	__ pts/dbl
- <input type="checkbox"/> Pung of Winds	__ pts/dbl	__ pts/dbl
- <input type="checkbox"/> Pung of Dragons	__ pts/dbl	__ pts/dbl
- <input type="checkbox"/> Kong of Simples	__ pts/dbl	__ pts/dbl
- <input type="checkbox"/> Kong of Terminals	__ pts/dbl	__ pts/dbl
- <input type="checkbox"/> Kong of Winds	__ pts/dbl	__ pts/dbl
- <input type="checkbox"/> Kong of Dragons	__ pts/dbl	__ pts/dbl
- <input type="checkbox"/> Pair of Simples	__ pts/dbl	__ pts/dbl
- <input type="checkbox"/> Pair of Terminals	__ pts/dbl	__ pts/dbl
- <input type="checkbox"/> Pair of Winds	__ pts/dbl	__ pts/dbl
- <input type="checkbox"/> Pair of Dragons	__ pts/dbl	__ pts/dbl
<u>Name (Chow based)</u>		<u>Points</u>
- <input type="checkbox"/> Four Chows		__ pts/dbl/%limit
- <input type="checkbox"/> Same Chow from 2 suits		__ pts/dbl/%limit
- <input type="checkbox"/> Same Chow from 2 suits twice		__ pts/dbl/%limit
- <input type="checkbox"/> Three Chows of the same numbers		__ pts/dbl/%limit
- <input type="checkbox"/> Same Chow from all suits		__ pts/dbl/%limit
- <input type="checkbox"/> Four Chows of the same numbers		__ pts/dbl/%limit
- <input type="checkbox"/> Two identical Chows		__ pts/dbl/%limit
- <input type="checkbox"/> Two identical Chows twice		__ pts/dbl/%limit
- <input type="checkbox"/> Two identical Chows twice, same number		__ pts/dbl/%limit
- <input type="checkbox"/> Three identical Chows		__ pts/dbl/%limit
- <input type="checkbox"/> Four identical Chows		__ pts/dbl/%limit
- <input type="checkbox"/> 123789 of the same suit		__ pts/dbl/%limit
- <input type="checkbox"/> 123789 twice of the same suit		__ pts/dbl/%limit
- <input type="checkbox"/> 123789 twice of two suits		__ pts/dbl/%limit
- <input type="checkbox"/> Run of 6 tiles of 1 suit		__ pts/dbl/%limit
- <input type="checkbox"/> 2 runs of 6 tiles of 1 suit		__ pts/dbl/%limit
- <input type="checkbox"/> 3 Chows of 2 suits, step 1		__ pts/dbl/%limit
- <input type="checkbox"/> 3 Chows of 3 suits, step 1		__ pts/dbl/%limit
- <input type="checkbox"/> 3 Chows of 1 suits, step 1		__ pts/dbl/%limit
- <input type="checkbox"/> 3 Chows of 2 suits, step 2		__ pts/dbl/%limit
- <input type="checkbox"/> 3 Chows of 3 suits, step 2		__ pts/dbl/%limit
- <input type="checkbox"/> 3 Chows of 1 suit, step 2		__ pts/dbl/%limit
- <input type="checkbox"/> 3 Chows of 2 suits, step 3		__ pts/dbl/%limit
- <input type="checkbox"/> 3 Chows of 3 suits, step 3		__ pts/dbl/%limit
- <input type="checkbox"/> 3 Chows of 1 suit, step 3		__ pts/dbl/%limit
- <input type="checkbox"/> 4 Chows of 1 suit, step 1		__ pts/dbl/%limit
- <input type="checkbox"/> 4 Chows of mixed suits, step 2		__ pts/dbl/%limit
- <input type="checkbox"/> 4 Chows of 1 suit, step 2		__ pts/dbl/%limit
<u>Name (Pung/Kong based)</u>		<u>Points</u>
- <input type="checkbox"/> Pung 1 and 9 of the same suit		__ pts/dbl/%limit
- <input type="checkbox"/> Pung 1 and 9 of the same suit twice		__ pts/dbl/%limit
- <input type="checkbox"/> 3 Pungs of Terminals & Honors		__ pts/dbl/%limit
- <input type="checkbox"/> 4 Pungs of Terminals & Honors		__ pts/dbl/%limit
- <input type="checkbox"/> 2 Pungs of the same number		__ pts/dbl/%limit
- <input type="checkbox"/> 2 Pungs of the same number twice		__ pts/dbl/%limit
- <input type="checkbox"/> 2 Pungs and a pair of the same number		__ pts/dbl/%limit
- <input type="checkbox"/> 3 Pungs of the same number		__ pts/dbl/%limit
- <input type="checkbox"/> 2 Pungs of a Chow set		__ pts/dbl/%limit
- <input type="checkbox"/> 2 Pungs + pair in sequence of 1 suit		__ pts/dbl/%limit
- <input type="checkbox"/> 3 Pungs in sequence of 2 suits		__ pts/dbl/%limit
- <input type="checkbox"/> 3 Pungs in sequence of 3 suits		__ pts/dbl/%limit
- <input type="checkbox"/> 3 Pungs in sequence of 1 suit		__ pts/dbl/%limit
- <input type="checkbox"/> 3 Pungs of a Chow set		__ pts/dbl/%limit
- <input type="checkbox"/> 3 Pungs of 2 suits, jump 2		__ pts/dbl/%limit
- <input type="checkbox"/> 3 Pungs of 3 suits, jump 2		__ pts/dbl/%limit

-	<input type="checkbox"/> 3 Pungs of 1 suit, jump 2	___ pts/dbl/%limit	
-	<input type="checkbox"/> 3 Pungs of 2 suits, jump 3	___ pts/dbl/%limit	
-	<input type="checkbox"/> 3 Pungs of 3 suits, jump 3	___ pts/dbl/%limit	
-	<input type="checkbox"/> 3 Pungs of 1 suit, jump 3	___ pts/dbl/%limit	
-	<input type="checkbox"/> 3 Pungs of 2 suits, jump 4	___ pts/dbl/%limit	
-	<input type="checkbox"/> 3 Pungs of 3 suits, jump 4	___ pts/dbl/%limit	
-	<input type="checkbox"/> 3 Pungs of 1 suit, jump 4	___ pts/dbl/%limit	
-	<input type="checkbox"/> 4 Pungs in sequence	___ pts/dbl/%limit	
-	<input type="checkbox"/> 4 Pungs in sequence of 1 suit	___ pts/dbl/%limit	
-	<input type="checkbox"/> Two concealed Pungs	___ pts/dbl/%limit	
-	<input type="checkbox"/> Three concealed Pungs	___ pts/dbl/%limit	
-	<input type="checkbox"/> Two Kongs	___ pts/dbl/%limit	
-	<input type="checkbox"/> Two melded Kongs	___ pts/dbl/%limit	
-	<input type="checkbox"/> Two concealed Kongs	___ pts/dbl/%limit	
-	<input type="checkbox"/> Three Kongs	___ pts/dbl/%limit	
-	<input type="checkbox"/> Three concealed Kongs	___ pts/dbl/%limit	
-	<input type="checkbox"/> 4 Pungs, one concealed	___ pts/dbl/%limit	
-	<input type="checkbox"/> 4 Pungs, two concealed	___ pts/dbl/%limit	
-	<input type="checkbox"/> 4 Pungs, three concealed	___ pts/dbl/%limit	
-	<input type="checkbox"/> 4 Concealed Pungs	___ pts/dbl/%limit	
-	<input type="checkbox"/> 5 concealed Pungs	___ pts/dbl/%limit	
-	<input type="checkbox"/> 4 Kongs	___ pts/dbl/%limit	
-	<input type="checkbox"/> 4 Concealed Kongs	___ pts/dbl/%limit	
-	<input type="checkbox"/> 2 Dragons	___ pts/dbl/%limit	
-	<input type="checkbox"/> Little Three Dragons	___ pts/dbl/%limit	
-	<input type="checkbox"/> Little Three Winds	___ pts/dbl/%limit	
-	<input type="checkbox"/> Big Three Winds	___ pts/dbl/%limit	
	<u>Name (Whole Hand based)</u>	<u>Points</u>	
-	<input type="checkbox"/> Chicken Hand	___ pts/dbl/%limit	
-	<input type="checkbox"/> No-Points Hand	___ pts/dbl/%limit	
	<u>Name (Misc based)</u>	<u>Points</u>	
-	<input type="checkbox"/> Pair of 2's, 5's, or 8's	___ pts/dbl/%limit	
v.	Limit & Special Hands: (can be set for winners & losers)	<input type="checkbox"/> Allow multiple limit hands	
	<u>Name</u>	<u>Points</u>	<u>Action</u>
-	<input type="checkbox"/> All Green	___ pts/dbl/%limit	Modify
-	<input type="checkbox"/> Nine Gates	___ pts/dbl/%limit	Modify
-	<input type="checkbox"/> Thirteen Orphans	___ pts/dbl/%limit	Modify

[1084] The Administrator module comprises a four sub-modules. A Payment Manager sub-module 261 is configured to charge users/client terminal(s) 130 for use and refund money or credit to users/client terminal(s) 130. A User Manager sub-module 262 is configured to view user information, upgrade the status of a user (e.g., to VIP status), and deactivate a user when applicable. A Reporting Console sub-module 263 is configured to view statistical information pertaining to the number of total users, the number of users online, financial reports organized by date or user, the number of membership cancellations, new membership data, etc. A Tournament Manager sub-module 264 is configured to create tournaments, manage tournaments, and manage tournament schedules. When creating a tournament, the Tournament Manager sub-module 264 is configured to set a number of tables, a tournament format, a tournament level restriction, an entry fee amount, a start date and time, a tournament type (e.g., a win is based on a number of points, a time limit, or a number of rounds), and whether spectators are allowed.

Additional Aspects of the Invention

[1085] As shown in FIGURE 1, host 110 may comprise multiple servers 111-117, each of which are responsible for different operating tasks of host 110. One of skill in the art will appreciate alternative configurations comprising more or less servers, as the servers 111-117 depicted in FIGURE 1 are presented only for illustrative purposes. The operation of the servers 111-117 in combination, sub-combination or alone may depend on certain interactions with client terminal(s) 130. Such interactions between client terminal(s) 130 and the servers 111-117 of host 110 result in one of several potential graphical displays which are described in greater detail below in conjunction with process flow diagrams.

[1086] In accordance with one aspect of the invention, FIGURE 9 shows a flow chart of an illustrative method for managing an email delivery scheme for new members in accordance with one aspect of the invention. The exemplary method begins at step 902 when host 110 sends a first email to a new user after that user has registered. The first email includes any amount of information pertinent to the registration process and subsequent membership of the user. After the first email is sent, host 110 will determine if the new user is verified. The verification process performed by host 110 is configured to verify certain aspects about the new user such as the user's personal information, information pertaining to the membership registration, among other information. For example, the verification process may involve the user clicking on a web link in an email.

[1087] If the user is verified, host 110 sends a second email to the new user that thanks the new user for verifying (step 904). If the host 110 determines that the new user has accessed the gaming environment only once, host 110 sends a third email (step 906) to remind the new user that they have credit and to invite the new user to play a game offered by host 110. If host 110 determines that the new user has accessed the gaming environment multiple times, host 110 sends, at step 908, a fourth email that offers additional credit if the new user refers a friend, and then host 110 determines whether the new user has deposited funds into an account associated with game play in the online gaming environment. If host 110 determines that the new user has not deposited funds, host 110 sends a fifth email (step 910) that encourages the new user to play and offers a limited-time offer.

[1088] In the case where the new user is not verified, host 110 sends, at steps 912-914, sixth and seventh emails at different configurable time periods (e.g., seven and fourteen days, respectively). The sixth and seventh emails each encourage the new user to verify, and alert the new user that he or she will subsequently receive credit for verifying.

[1089] The host 110 may also send various other emails including emails pertaining to account statements, processing of deposits and withdrawals, confirmation of profile settings, a forget password, tournament announcements, game play announcements, tournament reminders, inactivity reminders, advertisements, limited-time offers, refund notification, jackpot winner announcements, schedules, new features, events, etc.

[1090] In accordance with one aspect of the invention, FIGURE 10 shows a flow chart of an illustrative method for logging in to an online gaming environment. The exemplary method begins when a user at a client terminal 130 logs in to host 110 for an online gaming experience at step 1002. There are a number of different ways in which a user may log in to such an online gaming experience. For example, the log in process may require the user to enter a valid name or identification and associated password.

[1091] At step 1106, host 110 determines the member type of the user (e.g., guest or subscribed). In one embodiment of the invention, this determination is made via the database server 117, which stores information pertaining to member type. If the user is a guest member (i.e., not a subscribed member), host 110 will display subscription offers such as those shown in FIGURE 6 (e.g., see “GET PREMIUM!” and “GET VIP!”), and the user will continue to view the lobby web page at step 1116. If the user is a subscribed member, host 110 will identify the user’s membership status as one of two membership statuses in step 1110. One of skill in the art can appreciate fewer or more membership statuses than those described herein that offer different functionality to a given user.

[1092] For example, host 110 identifies a user’s membership status as either a premium member or a VIP member. As a VIP member, the user is be afforded additional gaming functionality beyond what the user would be afforded as a premium member. Such additional functionality may include, for example, unlimited game credits, personalized profile settings, a personal webpage, and other functionalities. If the user is a premium member, host 110 will display upgrade offers at step 1112 and the user will continue to view the lobby web page at step 1116. If the user is a VIP member, host 110 will display VIP-based information at step 1114 and the user will continue to view the lobby web page at step 1116.

[1093] In accordance with one aspect of the invention, FIGURE 11 shows a flow chart of an illustrative method for monitoring unfair game play. A primary challenge for any

online gaming network is to prevent or at least reduce the impact of collusion, which occurs with two or more players are unfairly assisting one another. For example, it is possible for one player at a table to unfairly assist or “feed” another player at the same table. Therefore, in one aspect of the invention, host 110 monitors certain games for unfair game play where one player purposely sets up another player for victory.

[1094] The host 110 may monitor numerous aspects of game play. In one embodiment, the host 110 may monitor account and game creation. Upon account creation, the host 110 captures the IP address of the user. The host 110 may then use the IP address to determine whether a particular network creates more than one account or whether one or more users from a particular network are attempting to play in the same game. The host 110 may also place a cookie on a user’s computer every time any number of accounts are created or accessed from that computer. The host 110 may then count the number of accounts a particular computer is accessing at any giving time. If a user at a computer attempts to operate two players at the same game/table (e.g., the user opens two browser windows on the same computer), the host 110 may display an error message and/or prevent at least one player operated by the computer from joining the table. Likewise, if the same IP address is associated with two or more players trying to play at the same table, the host 110 may display an error message to both players and/or prevent at least one of the player from joining the table. In both cases where a computer or an IP address can be associated with two or more players at a table, the other players are warned accordingly.

[1095] Attention is drawn to FIGURE 11 shows a flow chart of an illustrative method for monitoring unfair game play in accordance with one aspect of the invention. At steps 1102 and 1104, a game starts and ends, respectively. The host 110 monitors game play at step 1106. For example, host 110 will review whether one user fed a game piece to another user from the same IP/HTTP header and any other suitable form of identification. If, at step 1108, host 110 detects an act of collusion (i.e., an indication that the two users were unfairly participating in the game), then host 110 subsequently notifies the participants of that game at step 1110, and, at step 1112, flags the game (e.g., for future review). If, at step 1114, host 110 does not detect a collusion, then the process continues for other game plays or games. One of skill in the art will recognize that step 1104 can occur after steps 1106-1114. In other words, steps 1106-1114 may occur during game play.

[1096] In other embodiments, the host 110 may randomize table positions of players at a table, use a “robot” to play at a table and thus regulate at least a portion of game play, review the game history for unusual move(s) by one player that benefit another player, monitor the plays of certain money earners meeting a specified threshold level of earnings, authorize player attempts to create or join a game/table, monitor unusual increases in player ratings or rankings, and/or allow players to rate each other or report suspicious activity by other players.

[1097] In other embodiments, the host 110 may reveal all hands for viewing by every player at the table while the game is occurring. Alternatively, players may view an archived version of a previously played game that reveals all hands to the viewing players.

[1098] In alternative embodiments, the host 110 may monitor for atypical discarding of particular game pieces by one player and the subsequent acquiring of those discarded game pieces by another player. In addition to data stored into the data base, including a game date, a game identifier and player identifiers, the host 110 may store discarded game piece identifiers for each player, acquired game piece identifiers for each player, indications that a particular discarded game piece was discarded from a combination existing in a discarding player’s hand, indications that a particular acquired game piece or a set of particular acquired game pieces filled a combination in an acquiring player’s hand, and indications that the acquired game piece was integral to securing a win for an acquiring player’s hand (e.g., the acquired game piece allowed the acquiring player to win the game immediately upon acquiring the game piece). The host 110 may use any of the stored data to determine whether collusion exists. The host 110 may generate periodic or triggered reports based on the stored data. One of skill in the art will appreciate and recognize various kinds of atypical discarding of game pieces. Any number of these kinds of atypical discarding of game pieces may be stored and referred to from the database server 117 or other suitable device.

[1099] For example, the host 110 may report that the total number of discards for a particular player is within a specified threshold of the total number of game piece acquisitions for another player (e.g., the first player discarded game pieces n times and the second player acquired games pieces from the discarded game pieces of the first player m times, where n and m are within a threshold x from each other). Alternatively, the host 110 may report that the number of discarded game pieces from combinations existing in a player’s hand meets or exceeds a threshold. The host 110 may instead correlate a number of discarded game pieces

by a first player with a number of acquired game pieces that filled a combination in the hand of a second player. One of skill in the art will appreciate alternative reports by the host 110 that are within both the scope and spirit of the invention.

[1100] The present application incorporates by reference all descriptions and drawings in U.S. Provisional application no. 60/821,501 entitled "Computer-Based Gaming System," filed on August 4, 2006, and U.S. Provisional application no. 60/913,992 entitled "Computer-Based Gaming System," filed on April 25, 2007.

[1101] While illustrative systems and methods as described herein embodying various aspects of the invention are shown, it will be understood by those skilled in the art, that the invention is not limited to these embodiments. Aspects of the invention may be included into existing online gaming systems and methods. Modifications may be made by those skilled in the art, particularly in light of the foregoing teachings. For example, each of the elements of the aforementioned embodiments may be utilized alone, in combination or in sub-combination with elements of the other embodiments. It will also be appreciated and understood that modifications may be made without departing from the true spirit and scope of the invention. The description is thus to be regarded as illustrative instead of restrictive on the invention.

What is claimed is

1. A method for operating an online gaming environment, the method comprising:
hosting a game for a plurality of players, the game being conducted within the online gaming environment;
creating a customized rule set in accordance with instructions received by at least one of the plurality of players; and
conducting the game in accordance with the customized rule set.
2. The method of claim 1, further comprising:
monitoring collusion between two or more of the plurality of players.
3. The method of claim 1, further comprising:
archiving at least one portion of the game; and
permitting a user of the online gaming environment to view the archived at least one portion of the game.
4. The method of claim 1, further comprising:
using an automated player to advance operations of the game.
5. The method of claim 1, wherein the creating a customized rule set in accordance with instructions received by one of the plurality of players comprises:
receiving instructions from a user that indicate a particular rule to include in the customized rule set.
6. The method of claim 5, wherein the particular rule is selected from a plurality of stored rules.
7. The method of claim 5, wherein the particular rule is generated by the user.
8. The method of claim 2, wherein the monitoring collusion between two or more of the plurality of players comprises:
reviewing a first play from a first player of the two or more players; and

determining whether the first player made the first play in collusion with a second player of the two or more players.

9. The method of claim 2, wherein the monitoring collusion between two or more of the plurality of players comprises:

checking if a first identification of a first player relates to a second identification of a second player; and

determining, if the first identification relates to the second identification, that the first player is playing in collusion with the second player.

10. The method of claim 2, wherein the monitoring collusion between two or more of the plurality of players is performed while the game is in progress.

11. The method of claim 2, wherein the monitoring collusion between two or more of the plurality of players is performed after the game has ended.

12. The method of claim 3, further comprising:
providing, to the user, commentary related to the at least one portion of the game.

13. The method of claim 12, wherein the commentary corresponds to analysis related to the archived at least one portion of the game.

14. The method of claim 13, wherein the commentary originates from another user of the online gaming environment.

15. The method of claim 13, wherein the commentary originates from a computer algorithm of the online gaming environment.

16. The method of claim 13, wherein the commentary is provided in a text format.

17. The method of claim 13, wherein the commentary is provided in an audio format.

18. The method of claim 13, wherein the commentary is provided in a video format.

19. The method of claim 1, wherein the game is based on Mahjong.
20. The method of claim 4, wherein the using an automated player to advance operations of the game includes:
 - determining a winning combination of game pieces that the automated player will attempt to achieve during game play.
21. The method of claim 4, wherein the using an automated player to advance operations of the game includes:
 - determining whether the automated player should acquire a game piece.
22. The method of claim 4, wherein the using an automated player to advance operations of the game includes:
 - determining whether the automated player should discard a game piece.
23. The method of claim 1, further comprising:
 - permitting a user of the online gaming environment to view analysis related to the game while the game is occurring.
24. A system for operating an online gaming environment, the system comprising:
 - at least one processor;
 - a network interface;
 - a memory, operatively coupled to the processor, for storing logical instructionswherein execution of the logical instructions by the processor results in the performing of at least the following operations:
 - hosting a game for a plurality of players, the game being conducted within the online gaming environment;
 - creating a customized rule set in accordance with instructions received by at least one of the plurality of players; and
 - conducting the game in accordance with the customized rule set.
25. The system of claim 24, wherein the operations further include:
 - monitoring collusion between two or more of the plurality of players.

26. The system of claim 24, wherein the operations further include:
archiving at least one portion of the game; and
permitting a user of the online gaming environment to view the archived at least one portion of the game.
27. The system of claim 24, wherein the operations further include:
using automated players to advance operations of the game.
28. The system of claim 24, wherein the operations further include:
permitting a user of the online gaming environment to view analysis related to the game while the game is occurring.
29. The system of claim 24, wherein the creating a customized rule set in accordance with instructions received by one of the plurality of players comprises:
receiving instructions from a user that indicate a particular rule to include in the customized rule set.

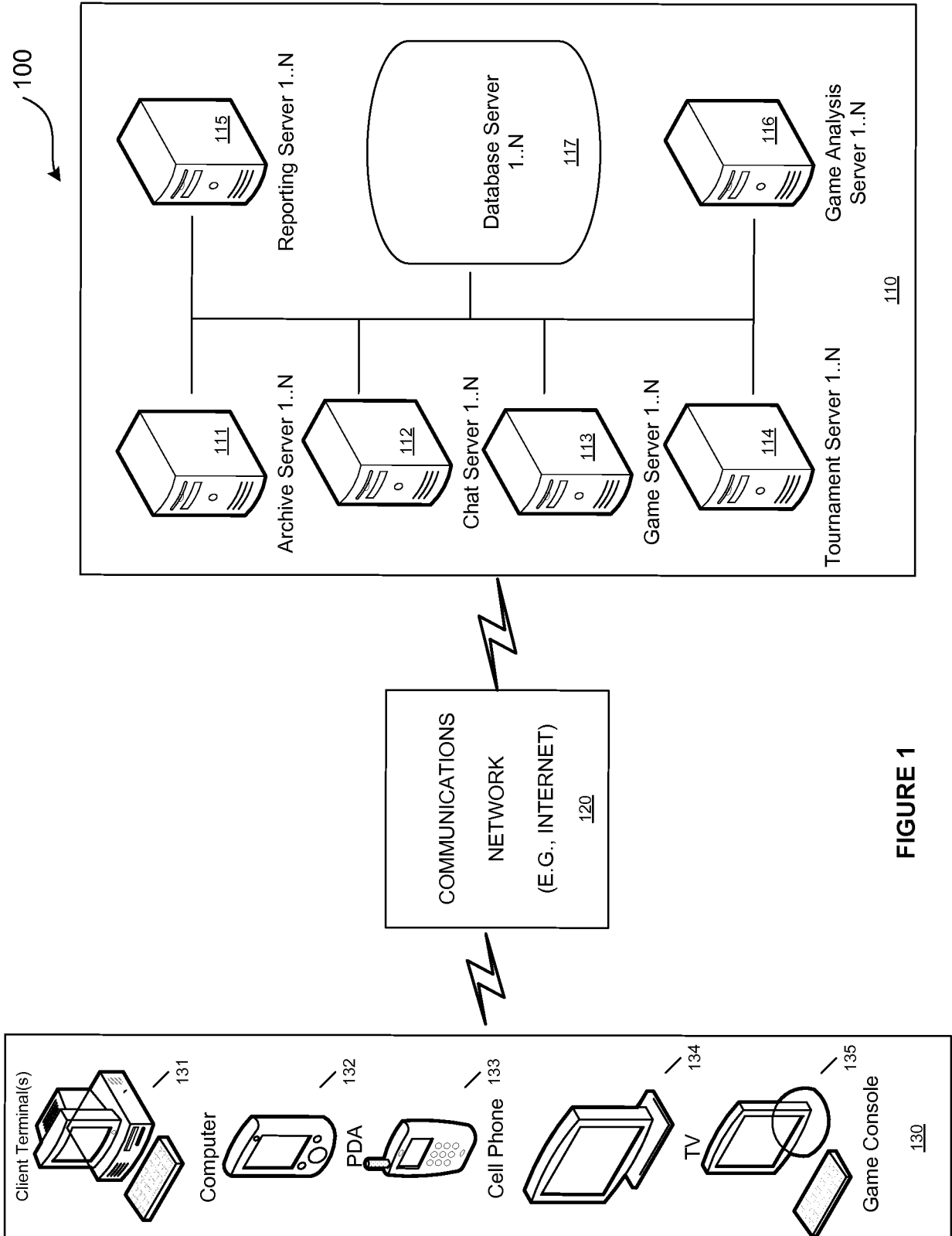


FIGURE 1

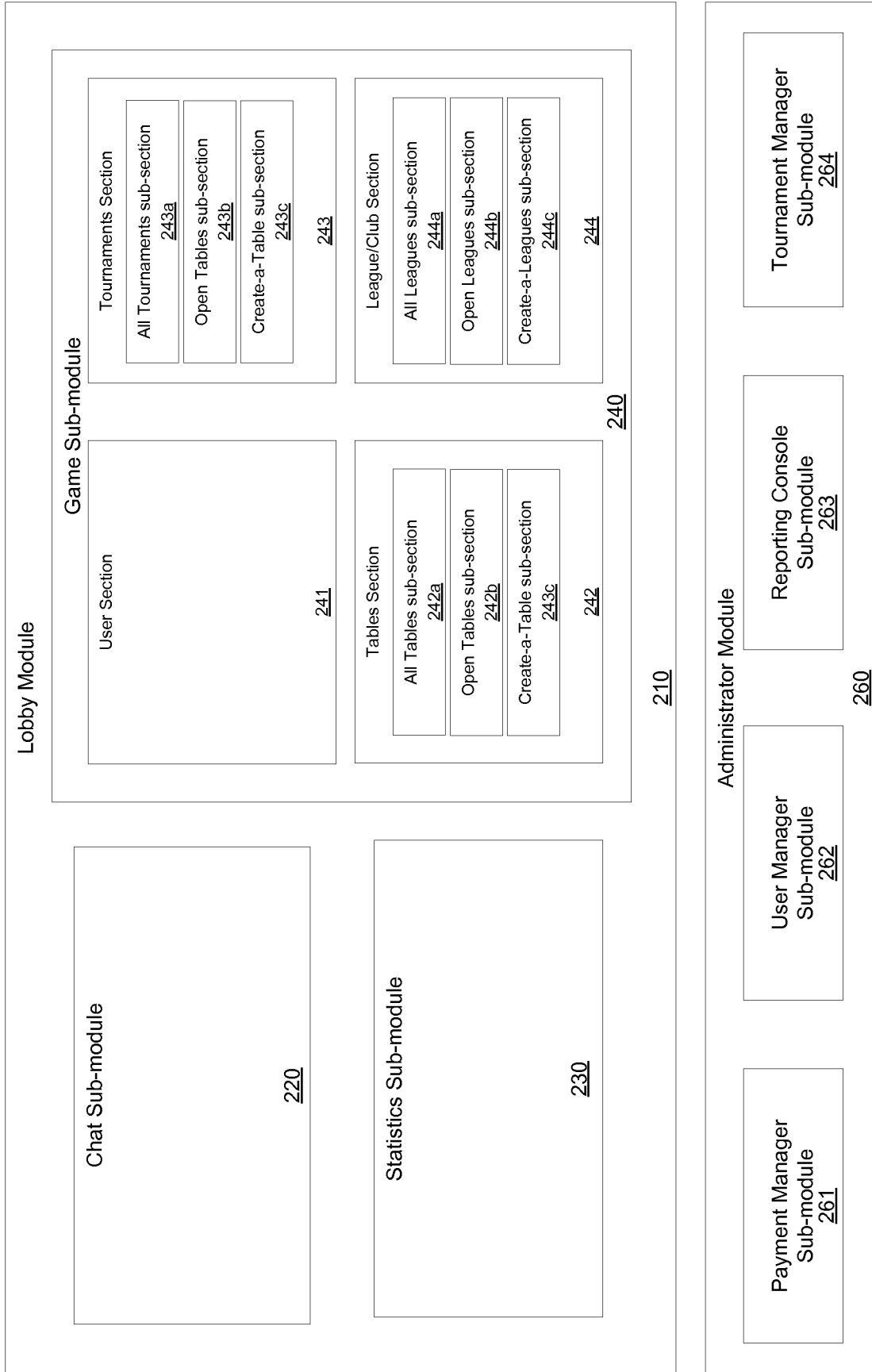


FIGURE 2

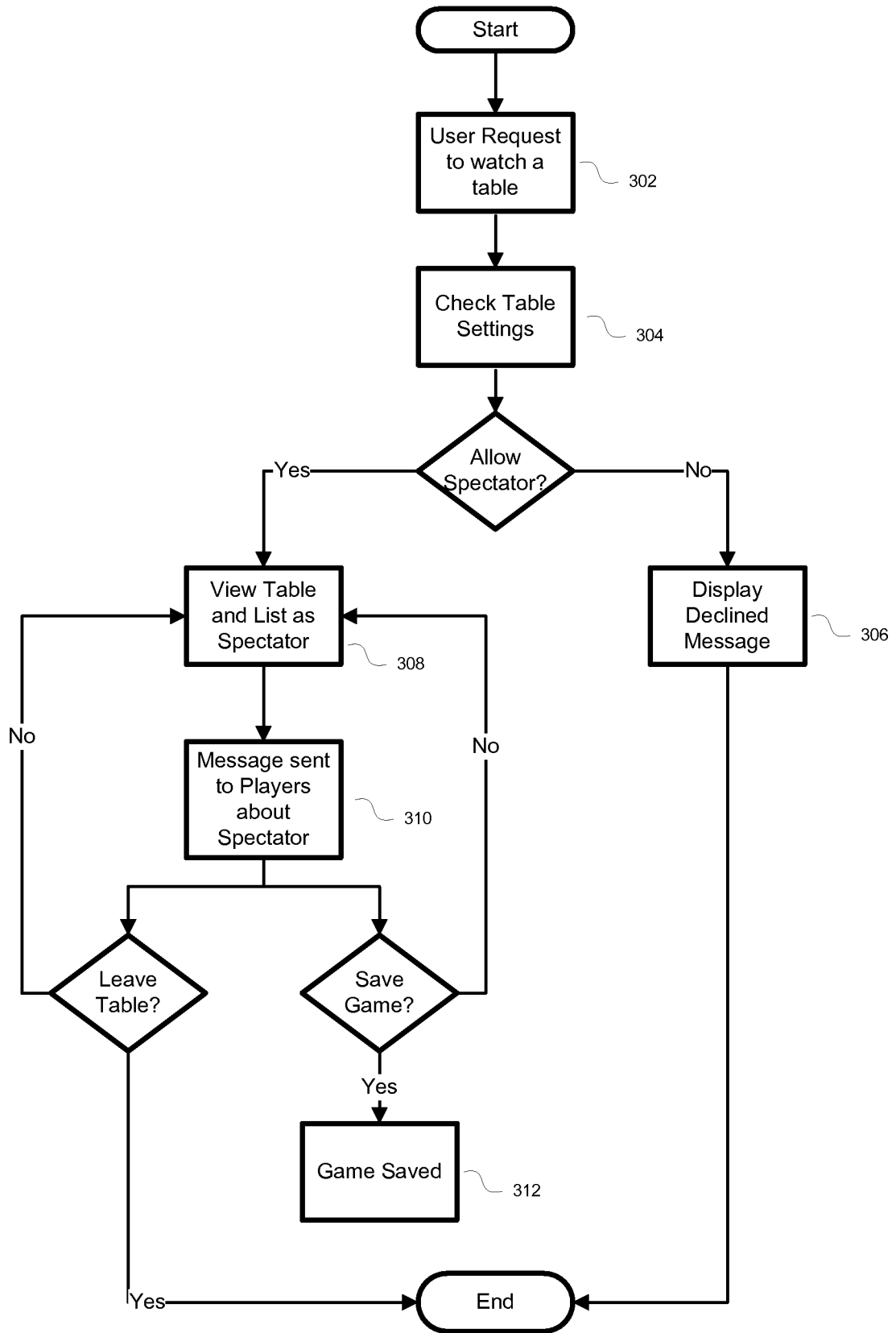


FIGURE 3

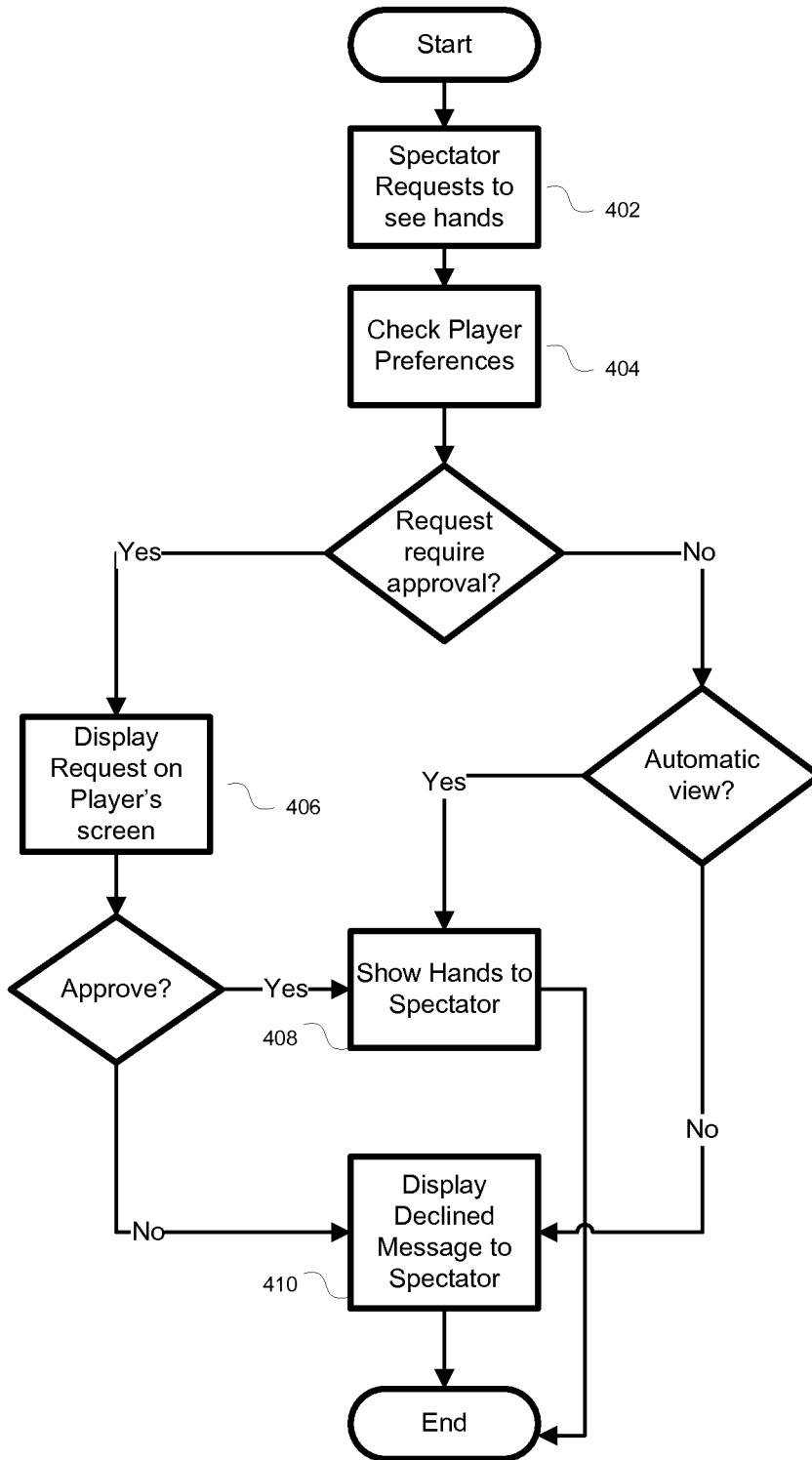


FIGURE 4

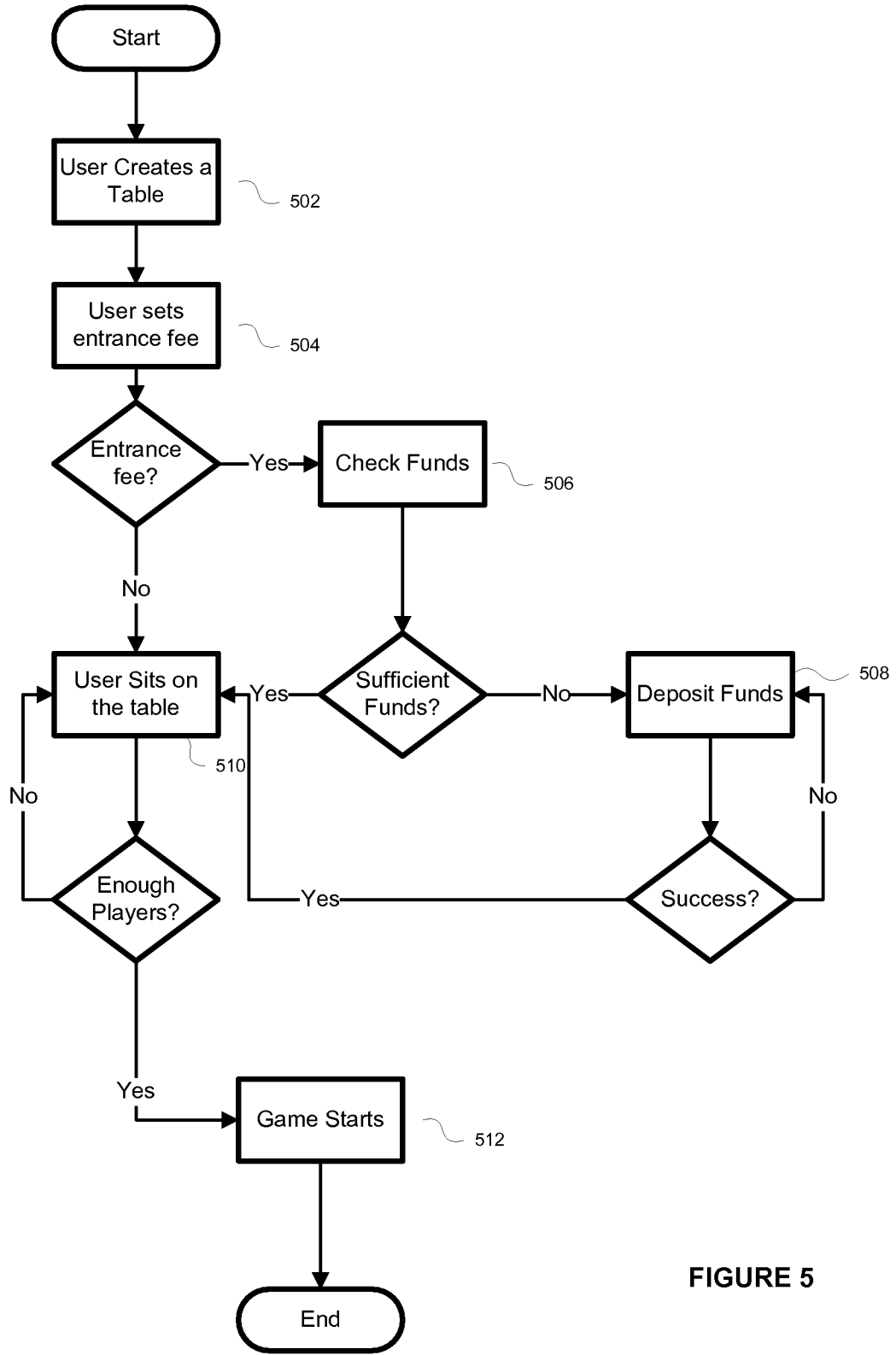


FIGURE 5

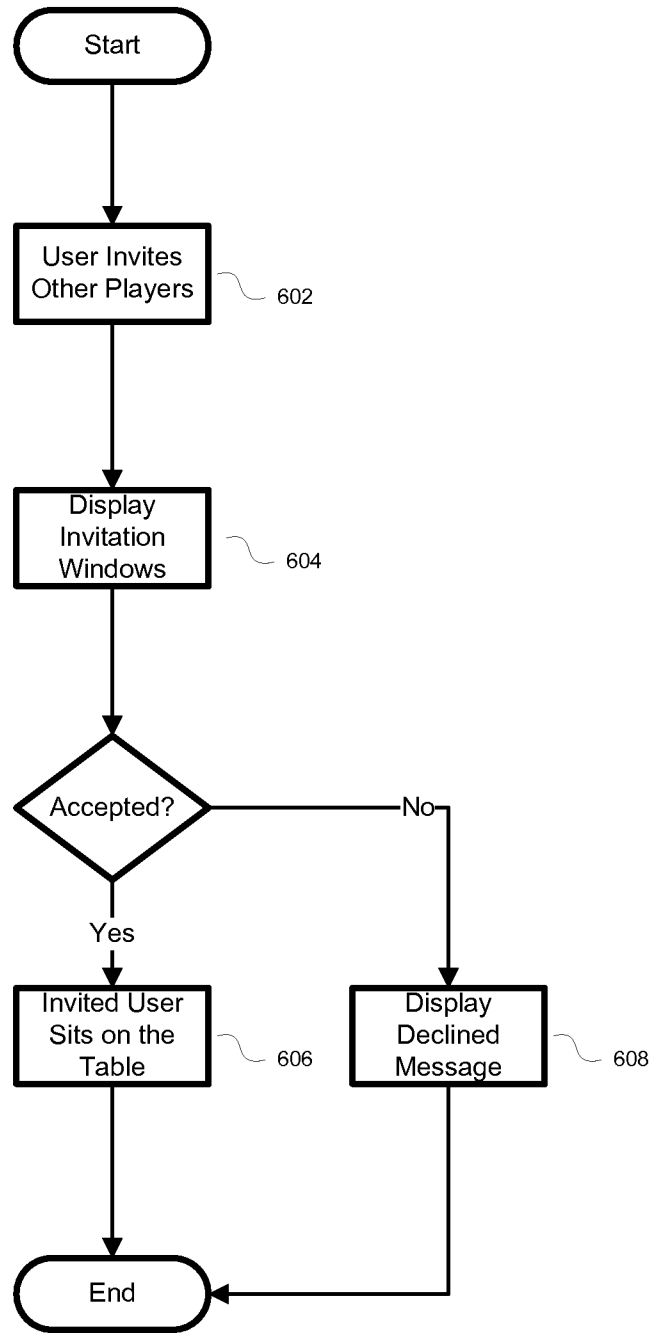


FIGURE 6

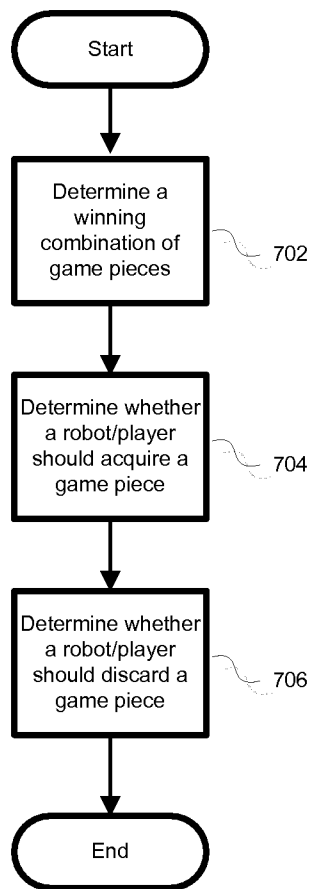


FIGURE 7

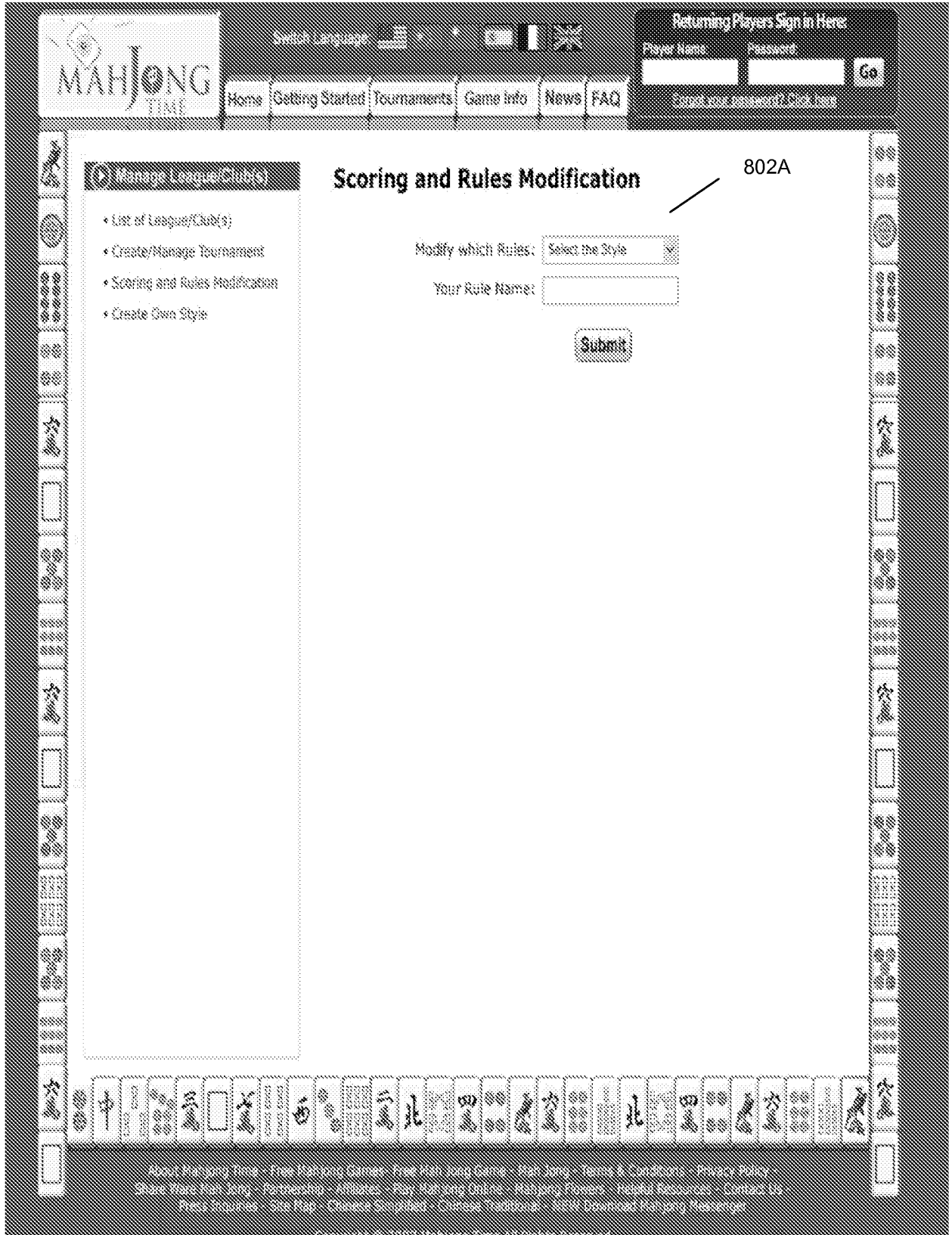


FIGURE 8A

MAHJONG TIME

Switch Language: [Flags]

Returning Players Sign in Here:
 Player Name: [] Password: [] Go

Home Getting Started Tournaments Game Info News FAQ

Log Out

Scoring and Rules Modification

Self Pick []
 Discarder Pays []
 Wind of Rounds Bonus []
 Seat and Wind Match []
 Flowers []
 Scores for Flowers and Seasons that Match Seat or Round

802B [] 806B []

804B []

Flower of own Wind [] [Modify](#) [Remove](#)
 Season of own Wind [] [Modify](#) [Remove](#)
 All Flowers [] [Modify](#) [Remove](#)
 All Seasons [] [Modify](#) [Remove](#)
[Add a New Hand](#)

Existing Hand Combinations

Basic Hands

Three Big Dragons [] [Modify](#) [Remove](#)
 Pung of player's Own Wind [] [Modify](#) [Remove](#)
 Kong of the Wind of the Round [] [Modify](#) [Remove](#)

[Add a New Hand](#)

Winner Stays East
 Winner Moves Counter Clock Wise

[Update](#)

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FIGURE 8B

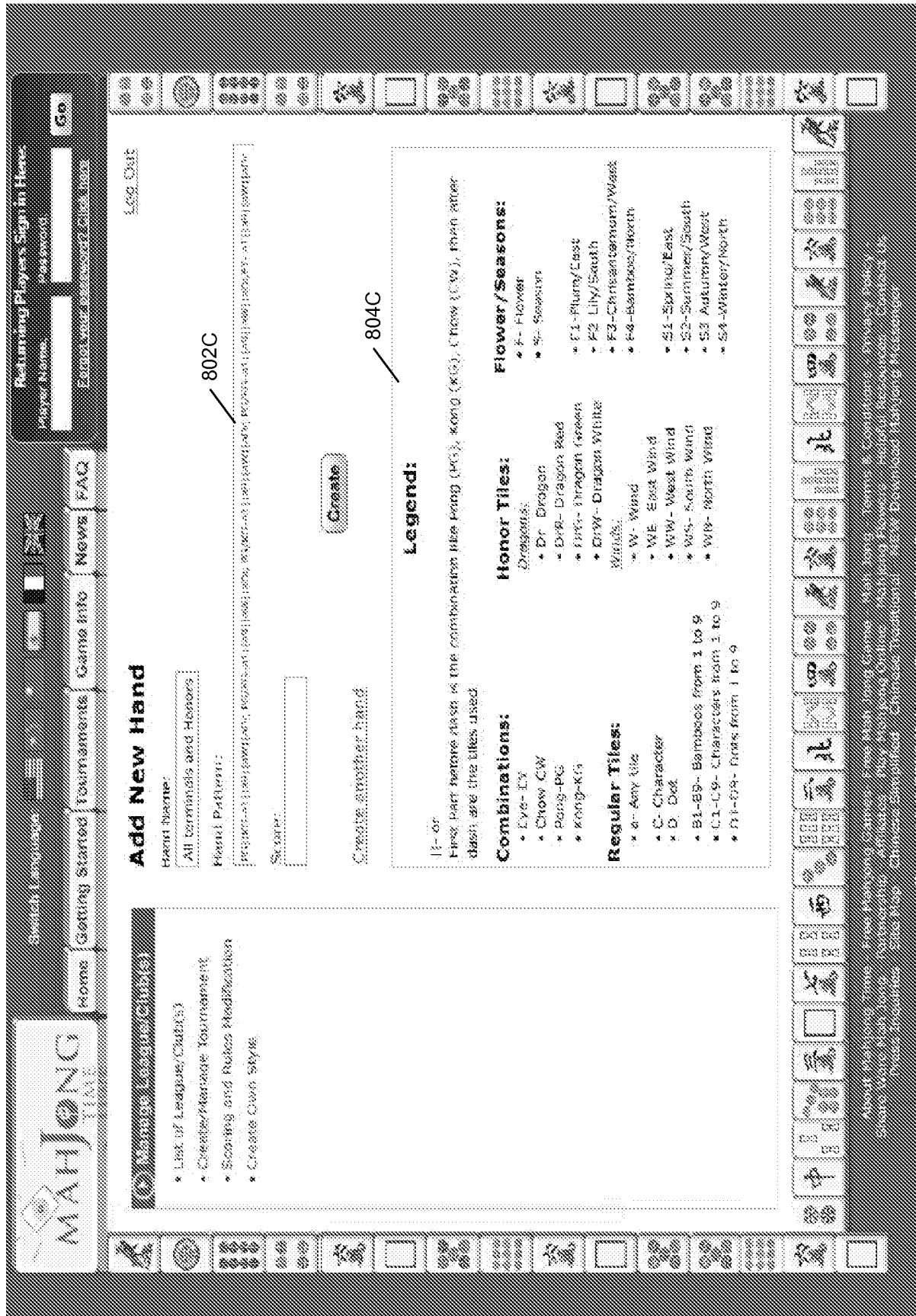


FIGURE 8C

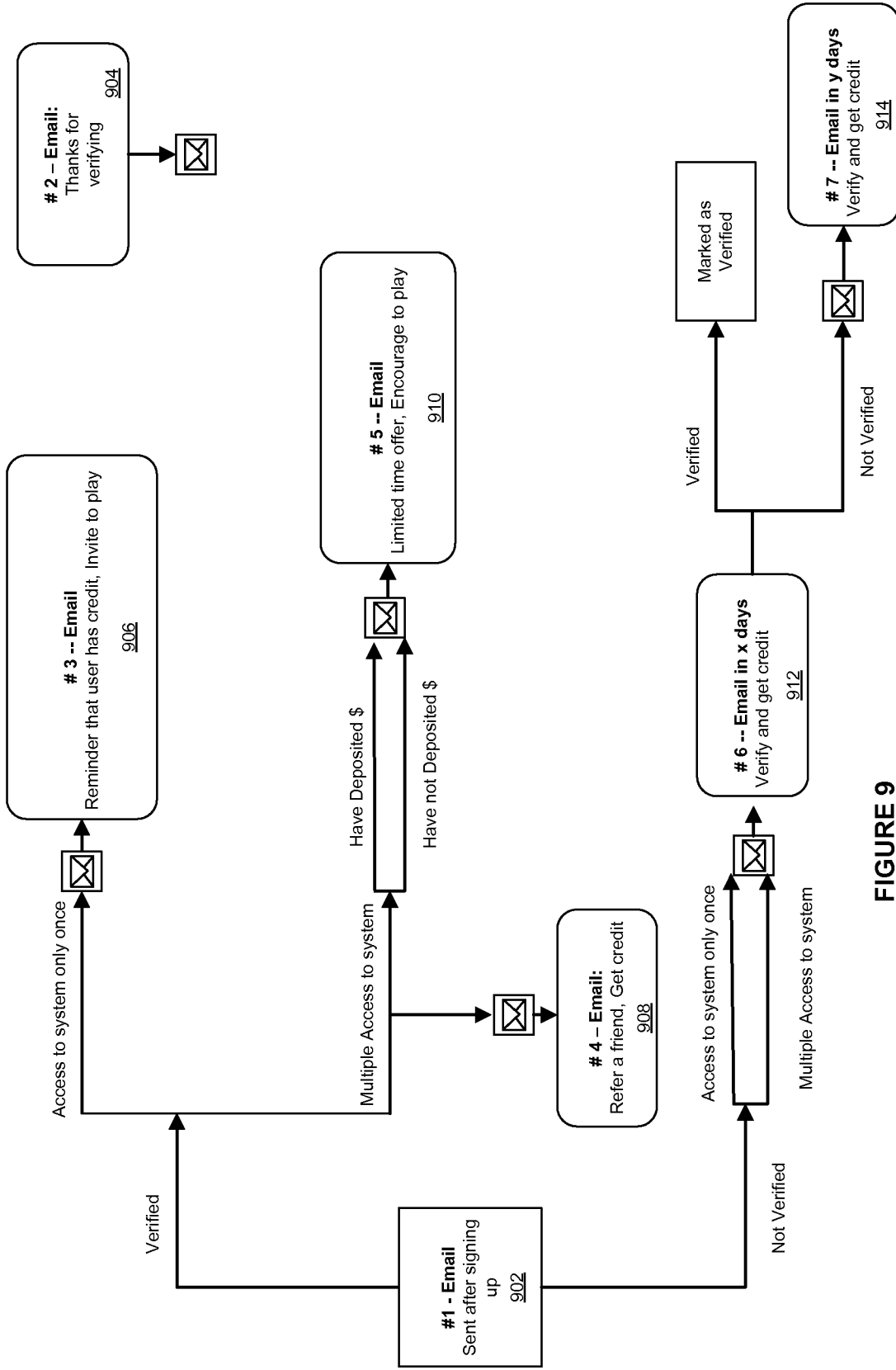


FIGURE 9

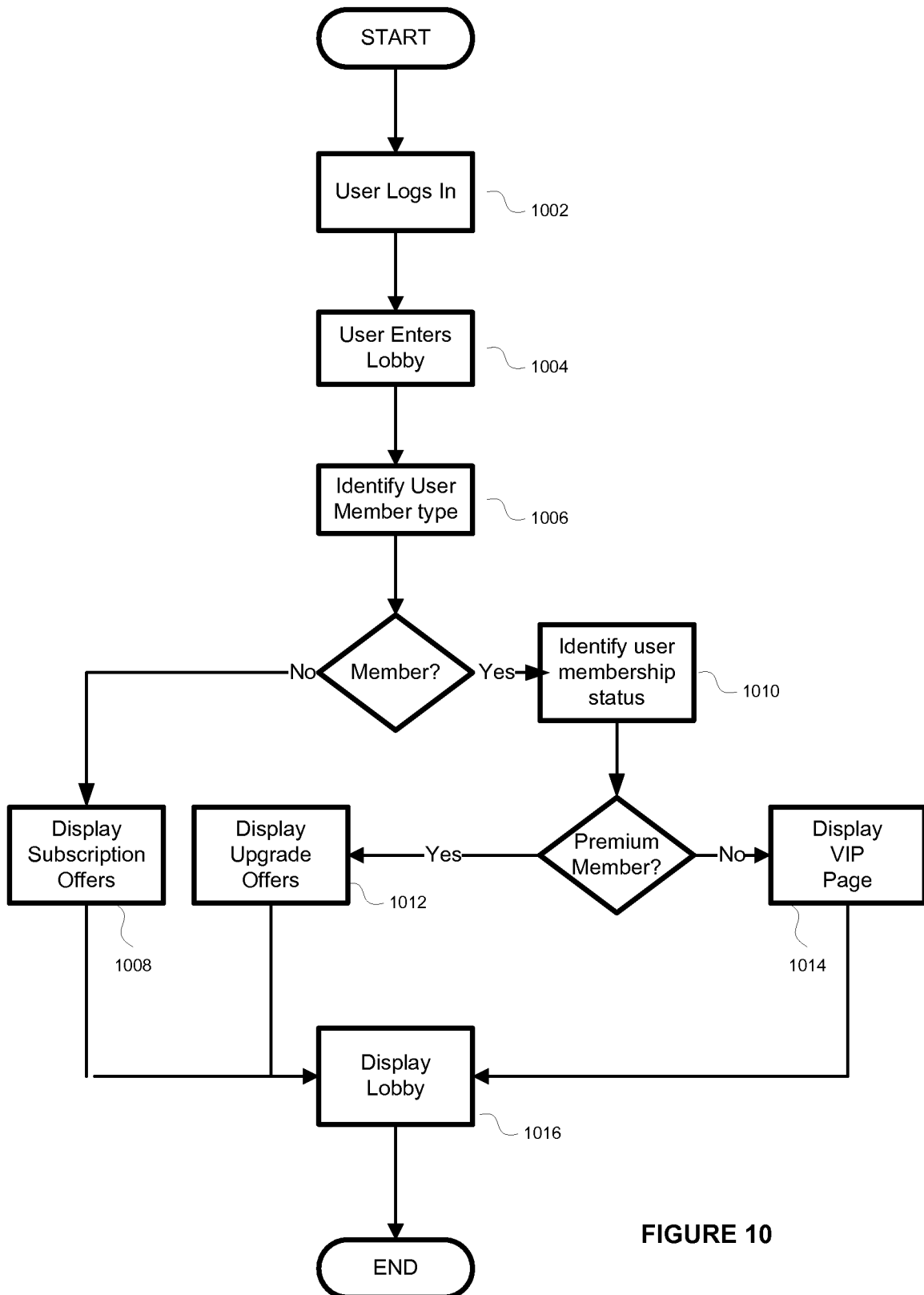


FIGURE 10

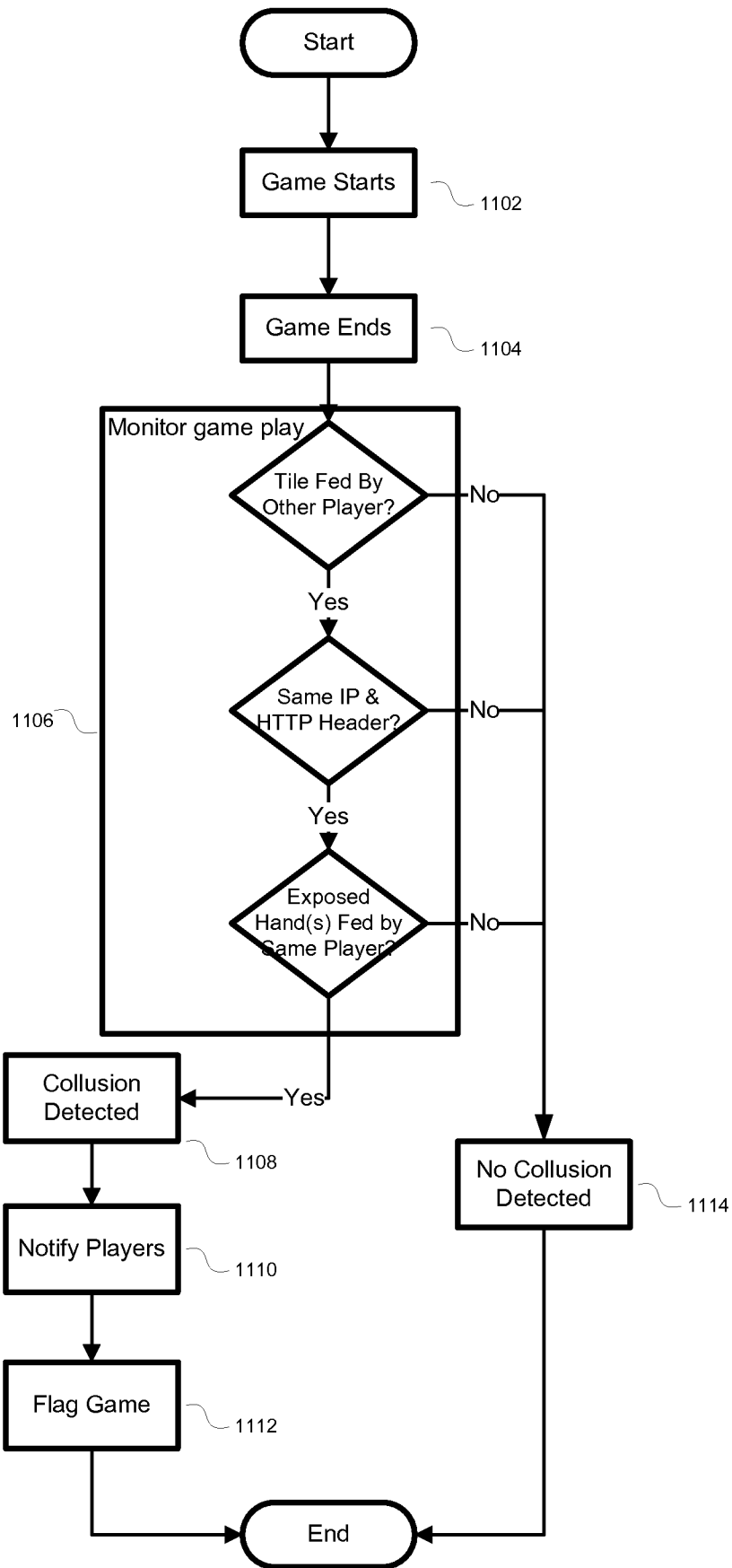


FIGURE 11