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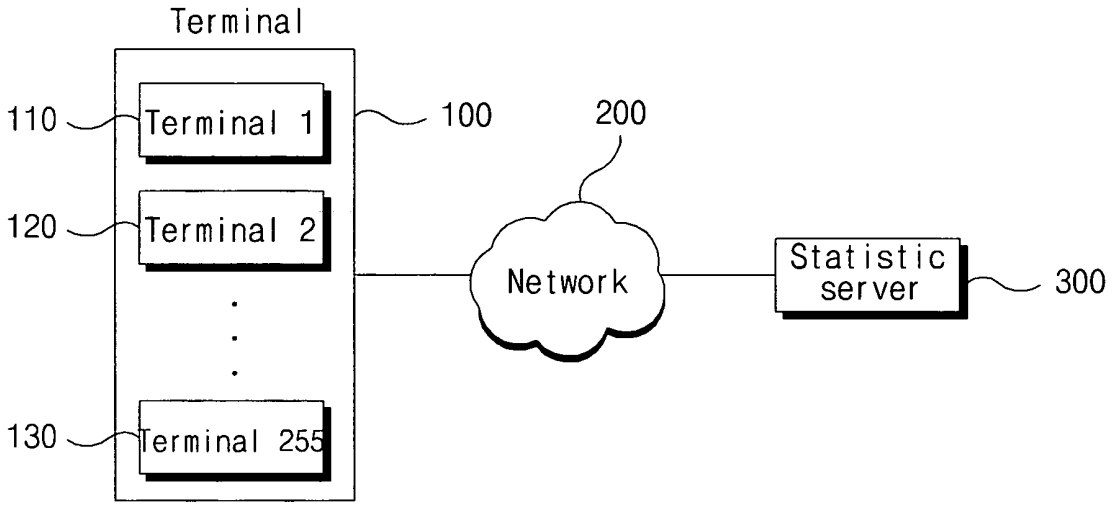
(54) Digital roulette game provision system

(57) A digital roulette game provision system that has different betting methods is provided, with the system comprising a plurality of terminals, with each terminal being designed to provide a digitally processed digital roulette game that has different betting methods, to receive the bills and coins entered by a user who selectively uses a digital roulette game that has different betting methods, to display the bills and coins in a form of betting money and chips, to receive statistic information such as betting information, roulette information, probability information, etc. previously stored in a statistic server, to display the above information on a screen, to transmit statistic information such as betting information, roulette information, probability information, etc. to a statistic server through a network based on the operation of a user who selectively uses a digital roulette game that has different betting methods, to select a winning number using a digitally processed digital wheel and an electronic ball, to display a winning state, a payoff rate, dividends and a process result on a screen in accordance with the bet placed by each user with respect to a digital roulette game that has different betting methods, to sum betting money and dividends and provide the same to the user who won a certain amount of dividends as a result of the digital roulette game, and to change the summed money into cash based on a user's selection.

Fig. 1



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Description

BACKGROUND OF THE INVENTION

1. Field of the Invention

[0001] The present invention relates to a digital roulette game provision system having different betting methods, and in particular to a digital roulette game provision system having a new betting method in which a plurality of digital roulette games are provided with different betting methods as compared to a conventional manual roulette game, and 255 gamers can concurrently play the game through a network.

2. Description of the Background Art

[0002] In a conventional manual roulette game which has been used for a few centuries, a single ball having a diameter of 19mm through 25mm is manually rolled in a certain direction which is reverse to a rotation direction of a rotation plate (roulette wheel). When the ball is dropped into a pocket having a roulette wheel number, a dealer recognizes a corresponding number and provides a player with a certain amount of money which is previously set. In the above conventional manual one-ball roulette game method, it does not need a special skill, so that a beginner can easily play the game.

[0003] The conventional manual roulette game uses only one ball and a roulette game wheel (rotation plate) on which numbers from 0 through 36 are regularly arranged in a particular non-numeric sequence. The above roulette game method is classified into the European method in which a roulette wheel has only one "0" pocket or the American method in which a roulette wheel has two zero pockets, "0" and "00."

[0004] The conventional manual roulette game has been played in nearly similar methods for a few centuries, with the European or American game being played with one or two "0" pockets and using one ball. Because the above conventional roulette game is played using only one roulette ball, the game is too simple, and it is impossible to provide a player with enough interest.

[0005] In addition, according to the conventional roulette game, a player selects numbers from 0 through 36, and a dealer manually rolls one ball in a direction reverse to a rotating roulette wheel. When the ball drops into the pocket of a certain number on the roulette wheel, the player who bet on that number wins. So, in the case of a single number bet, the winning probability is 1/37 in the European method, and the winning probability is 1/38 in the American method. Namely, the winning probabilities are too simple, so that it is impossible to give a player an enough excitement with respect to the winning of the roulette game.

[0006] In the conventional roulette game, the player cannot have various strategies and tactics, and the game is too simple, so that the player may easily feel tedious. The player may lose interest on the roulette game as compared to other casino games.

[0007] In particular, the conventional manual type roulette game has inaccurate probabilities that may be faked by the dealers and needs two dealers at each table. So, manpower cost and conflict between the dealer and customer increase, dividends and winning probabilities are low, and multiple players cannot play at the same time.

SUMMARY OF THE INVENTION

[0008] Accordingly, it is an object of the present invention to provide a digital roulette game provision system having different betting methods which overcomes the problems encountered in the conventional art.

[0009] It is another object of the present invention to provide a digital roulette game provision system having different betting methods in which a player may have a high winning expectation and may play the game with diverse strategies and tactics by providing diverse digital roulette game methods having different betting methods.

[0010] Furthermore, another object of the present invention is to provide a digital roulette game provision system having different betting methods in which a maximum of 256 players can concurrently play in a network, and a higher and proper winning probability is obtained by randomly adapting dividends.

[0011] To achieve the above objects in a roulette game provision system, there is provided a digital roulette game provision system that has different betting methods and comprises a plurality of terminals, with each terminal designed to provide a digitally processed digital roulette game that has different betting methods, to receive the bills and coins entered by a user who selectively uses a digital roulette game having different betting methods, to display the bills and coins in a form of betting money and chips, to receive statistic information such as betting information, roulette information, probability information, etc. previously stored in a statistic server, to display the above information on a screen, to transmit statistic information such as betting information, roulette information, probability information, etc. to a statistic server through a network based on the operation of a user who selectively uses a digital roulette game having different betting methods, to select a winning number using a digitally processed digital wheel and an electronic ball, to display a winning state, a payoff rate, dividends and a process result on a screen in accordance with a bet placed by each user with respect to a digital roulette game having different betting methods, to sum betting money and dividends and provide the same to the user who won a certain amount of dividends as a result of the digital roulette game, and to change the summed money into cash based on a user's selection; and a statistic server that provides a plurality of the terminals with statistic information such as betting information, roulette information, probability information, etc. accumulated to users who play the digital roulette game having different betting

methods, receives statistic information such as betting information, roulette information, probability information, etc. of users who play the digital roulette game having different betting methods received from the terminals and constructs a database using the above information.

[0012] To achieve the above objects in a roulette game provision system, there is provided a digital roulette game provision system that has different betting methods and comprises a terminal that is designed to provide a digitally processed digital roulette game that has different betting methods, to receive the bills and coins entered by a user who selectively uses a digital roulette game that has different betting methods, to display the bills and coins in a form of betting money and chips, to display statistic information such as previously stored betting information, roulette information, probability information, etc. on a screen, to store statistic information such as betting information, roulette information, probability information, etc. based on the operations by users who selectively use a digital roulette game that has different betting methods, to select a winning number using a digitally processed digital wheel and an electronic ball, to display a winning state, a payoff rate, dividends and a process result on a screen in accordance with the bet placed by each user with respect to a digital roulette game hat has different betting methods, to sum the betting money and dividends and provides to the user who obtains a certain amount of dividends in accordance with the result of the digital roulette game, and to change the sum into cash based on a user's selection.

BRIEF DESCRIPTION OF THE DRAWINGS

[0013] The present invention will become better understood with reference to the accompanying drawings which are given only by way of illustration, and thus, do not limit the present invention, wherein;

Figure 1 is a view illustrating a construction of a digital roulette game provision system that has different betting methods according to the present invention;

Figure 2 is a view illustrating a construction of a detailed block of a terminal according to the present invention;

Figure 3 is a view illustrating a detailed block of a program which controls a digital roulette game supported on a terminal according to the present invention;

Figure 4 is a view illustrating an operation principle of a digital roulette game provision system having different betting methods according to the present invention;

Figure 5 is a view illustrating a betting screen of a common roulette game according to the present invention;

Figure 6 is a view illustrating a betting screen of a hyper roulette game according to the present invention;

Figure 7 is a view illustrating a digital wheel which selects a winning number of a common roulette game and a hyper roulette game according to the present invention;

Figure 8 is a view illustrating a betting screen of a double roulette game according to the present invention; and

Figure 9 is a view illustrating two digital wheels which select a winning number of a double roulette game according to the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0014] The preferred embodiments of the digital roulette game provision system that has different betting methods according to the present invention will be described with reference to the accompanying drawings.

[0015] Figure 1 is a view illustrating a construction of a digital roulette game provision system having different betting methods according to the present invention. The constructions of the digital roulette game according to the present invention will be described in detail with reference to Figure 1.

[0016] The digital roulette game system according to the present invention comprises a plurality of terminals 100, a network 200 and a statistic server 300.

[0017] The terminals 100 each comprise a display unit 400 formed of a 26-inch LCD screen for providing digital roulette games having different methods implemented with digital signals, and a control unit 500 that controls digital roulette games. The digital roulette game can be played using one terminal 100 in different betting methods, and a maximum of 256 players can play the game using the network 200.

[0018] The users, who selectively use a digital roulette game having different betting methods, input bills or coins, and the terminals 100 each display the betting money and chip corresponding to the bills or coins entered by the users and receive statistic information such as betting information, roulette information, probability information, etc. which are previously stored in the statistic server 300 through the network 200 and display the above information on the screen.

[0019] The statistic information such as betting information, roulette information, and probability information entered based on the operation of the user, who selectively uses a digital roulette game that has different betting methods, is transmitted to the statistic server 300 through the network 200, and a winning number is selected using a digital wheel and electronic ball which are digitally displayed. A winning state, dividends and process result are displayed on the screen based on the betting amount of each user with respect to a digital roulette game that has different betting methods. The betting money and dividends are summed and provided to the users who won a certain amount of money as a result of the digital roulette game, and the user is provided with

cash corresponding to the winning money based on the user's selection.

[0020] The digital roulette game that has different betting methods according to the present invention comprises a common roulette game which is formed by simply converting a conventional manual roulette game into digital signals, a hyper roulette game in which a user bets by selecting a certain number from 0 through 36 randomly positioned at different regions, and a double roulette game in which a user bets by selecting double regions which are formed by double numbers from 0 through 14 positioned at axes X and Y.

[0021] The common roulette game, the hyper roulette game and the double roulette game will be described in detail in the following descriptions of the operation principles and methods according to the present invention.

[0022] Because the network 200 is a conventional network, the description of the same will be omitted. However, in the present invention, a maximum of 255 networks 200 can be connected.

[0023] The statistic server 300 provides accumulated betting information, roulette information and probability information to the users who play the digital roulette game that has different betting methods through the terminals 100 and receives statistic information such as betting information, roulette information and probability information of the users who play the digital roulette game that has different betting methods, with the above information being received from the terminals 100. With the above information, a database is constructed and provided to the users.

[0024] Figure 2 is a view illustrating a detailed block construction of a terminal according to the present invention. The construction of the terminal according to the present invention will be described in detail with reference to Figure 2.

[0025] The terminals 100 each comprise a display unit 400 and a control unit 500.

[0026] The display unit 400 is designed to digitally display a common roulette game, a hyper roulette game, and a double roulette game on a touch type 26-inch LCD screen, with each game being provided with different betting methods. The display unit 400 receives digital roulette game menu information of a common roulette game, a hyper roulette game, and a double roulette game which can be selected by a user on the touch type LCD screen and transmits the same to the control unit 500.

[0027] The display unit 400 displays the bills or coins entered by the users in the form of betting money and chips as a result of the digital roulette game menu information process of the common roulette game, the hyper roulette game and the double roulette game received from the control unit 500. The display unit 400 displays statistic information such as betting information, roulette information and probability information which are received from the statistic server 300 or which are previously stored in the control unit 500, with the above information being received through the network 200. In addition, the display unit 400 selects a winning number using a digital wheel and an electronic ball and displays a winning state, dividends and a process result on the screen based on the bet placed by each user with respect to a common roulette game, a hyper roulette game and a double roulette game, each having different betting methods.

[0028] The display unit 400 will be described in more details.

[0029] The display unit 400 comprises a monitor controller 410, a power unit 420, a monitor connection unit 430, and a touch control unit 440.

[0030] The power unit 420 is designed to supply power to the touch type LCD screen when each user turns on the switch with respect to a common roulette game, a hyper roulette game, and a double roulette game, each having different betting methods.

[0031] The monitor control unit 410 transmits digital roulette game menu information of a common roulette game, a hyper roulette game, or a double roulette game selected by a user on the touch type LCD screen to the control unit 500. The monitor control unit 410 receives statistic information such as betting information, roulette information and probability information with respect to a common roulette game, a hyper roulette game and a double roulette game processed by the control unit 500, displays the same on the touch type LCD screen and allows a 2D or 3D betting screen, a digital wheel and an electronic ball received from the control unit 500 to be outputted to the LCD screen.

[0032] Here, the monitor connection unit 430 is connected with a graphic control unit 520 and outputs a 2D or 3D betting screen, a digital wheel and an electronic ball to the LCD screen, with the 2D or 3D betting screen, a digital wheel and an electronic ball being received from the graphic control unit 520 of the control unit.

[0033] The touch control unit 440 is connected with the graphic control unit 520 of the control unit and converts roulette game menu information of a common roulette game, a hyper roulette game and a double roulette game selected by a user on the touch type LCD screen into position information for processing by the control unit 500 and transmits to the graphic control unit 520 of the control unit 500.

[0034] The control unit 500 executes a program on a common roulette game, a hyper roulette game and a double roulette game of a digital roulette game that each have different betting methods as the power of the display unit 400 is turned on and transmits to the display unit 400 through the graphic control unit 520.

[0035] The control unit 500 changes the bills or coins entered by the users into betting money and chips based on roulette game menu information of a common roulette game, a hyper roulette game and a double roulette game selected by a user. The control unit 500 provides statistic information such as previously stored roulette information, probability information and betting information, controls betting information, a winning state, a payoff rate and dividends based on a user's operation, processes

the result of a common roulette game, a hyper roulette game and a double roulette game which are digital roulette games that have different betting methods.

[0036] The control unit 500 will be described in more details.

[0037] The control unit 500 comprises a main control unit 510, a graphic control unit 520, a memory 530, a communication interface 540, and an audio input and output unit 550.

[0038] The main control unit 510 processes the digital roulette game menu information of a common roulette game, a hyper roulette game and a double roulette game which are digital roulette games that have different betting methods received from the display unit 400, changes the bills and coins entered by the user into betting money and chips, creates statistic information using betting information, roulette information and probability information received through the display unit 400, accumulates the above information and stores them in the memory 530. In addition, the main control unit 510 transmits the above information to the statistic server 300. The main control unit 510 controls betting information, winning state, a payoff rate and dividends based on a user's operation with respect to a common roulette game, a hyper roulette game and a double roulette game which are digital roulette games that have different betting methods and processes a result of a common roulette game, a hyper roulette game and a double roulette game which are digital roulette games that have different betting methods.

[0039] The graphic control unit 520 is connected with the monitor connection unit 430 of the display unit 400 and the touch control unit 440 and transmits digital roulette game menu information of a common roulette game, a hyper roulette game and a double roulette game, which are digital roulette games that have different betting methods received from the display unit 400, to the main control unit 510. The graphic control unit 520 transmits a graphic screen such as a 2D or 3D betting screen, a digital wheel screen and an electronic ball to the display unit 400, with the above graphic screens being differently formed based on a common roulette game, a hyper roulette game and a double roulette game which are digital roulette games that have different betting methods in accordance with a control of the main control unit 510.

[0040] The memory 530 stores a program concerning a common roulette game, a hyper roulette game and a double roulette game which are digital roulette games that have different betting methods and executed in accordance with a control of the main control unit 510 as the display unit 400 is turned on. The memory 530 stores and outputs statistic information created using betting information, roulette information and probability information in accordance with a common roulette game, a hyper roulette game and a double roulette game which are digital roulette games that have different betting methods.

[0041] The communication interface 540 provides a communication function so that the terminal 100 can efficiently transmit or receive information through the network 200 when it operates together with the statistic server 300.

[0042] The audio input and output unit 550 connects various audio signals such as background music, voice, etc. with an external speaker 600, in accordance with a common roulette game, a hyper roulette game and a double roulette game which are digital roulette games that have different betting methods, for providing various effect sounds as the roulette game is performed.

[0043] Figure 3 is a detailed view of a program which controls a digital roulette game supported on the terminal according to the present invention. The digital roulette game will be described in more detail with reference to Figure 3.

[0044] According to one of the most important features of the present invention, a common roulette game, a hyper roulette game and a double roulette game are digital roulette games that have different betting methods and are designed to be controlled by the control unit 500.

[0045] Here, the control unit 500 further comprises a digital roulette game program which is formed of a control module 531, a game selection module 532, a time check module 533, a wheel driving module 534, a betting module 535 and a money exchange module 536.

[0046] The control module 531 drives a common roulette game which is implemented in a digital method based on a user's selection, a hyper roulette game in which a certain number from 0 through 36 positioned at different random regions is randomly selected for making bets, and a double roulette game in which double regions created by double numbers from 0 through 14 provided at the axes X and Y are selected for making bets. In addition, the control module 531 changes the bills and coins entered by the users and processes and controls a result of betting information, winning state, a payoff rate and dividends based on a common roulette game, a hyper roulette game and a double roulette game which are digital roulette games that have different betting methods.

[0047] The game selection module 532 digitally displays a common roulette game, a hyper roulette game and a double roulette game on the screen of the user, so that the user can select the game and play the corresponding roulette game based on the selection.

[0048] The time check module 533 checks the betting time that is based on a common roulette game, a hyper roulette game and a double roulette game which are digital roulette games that have different betting methods selected by the users.

[0049] The wheel driving module 534 creates a betting screen, a digital wheel and an electronic ball expressed in a 2D or 3D graphic based on a common roulette game, a hyper roulette game and a double roulette game which are digital roulette games that have different betting methods in accordance with a selection by the game selection module 532. In the common roulette game and the hyper roulette game which randomly selects a certain

number from 0 through 36 positioned at different random regions, the winning number is determined by rotating one digital wheel and an electronic ball. In the double roulette game in which there are two rotating digital wheels that each have pockets numbered from 0 through 14, the user selects a combination of two numbers, where the y-axis corresponds to one rotating digital wheel and the x-axis corresponds to the other rotating digital wheel; winning numbers are determined when the each electric ball falls into a pocket in its respective digital wheel.

[0050] In the betting module 535, if the numbers selected by the user for the bets match with the winning number(s), the payoff rate and dividends are computed based on the bet amount, the type of bet, and the game selected through the selection module 532, whether the game selected by the user on a 2D or 3D graphic processed betting screen is a common roulette game, a hyper roulette game, or a double roulette game.

[0051] The money exchange module 536 exchanges the bills and coins entered by the user based on a common roulette game, a hyper roulette game and a double roulette game which are digital roulette games that have different betting methods into betting money (credit money) and sums the paid dividends with the betting money based on the computation of the betting module and exchanges the amount back into cash.

[0052] The operations and methods of the digital roulette game provision system that has different betting methods according to the present invention will be described.

[0053] Figure 4 is a view illustrating an operation principle of a digital roulette game provision system that has different betting methods according to the present invention. Figure 5 is a view illustrating a betting screen of a common roulette game according to the present invention. Figure 6 is a view illustrating a betting screen of a hyper roulette game according to the present invention. Figure 7 is a view illustrating a digital wheel which selects a winning number of a common roulette game and a hyper roulette game according to the present invention. Figure 8 is a view illustrating a betting screen of a double roulette game according to the present invention. Figure 9 is a view illustrating two digital wheels which select a winning number of a double roulette game according to the present invention.

[0054] The detailed operations and methods of the digital roulette game provision system that has different betting methods according to the present invention will be described as follows with reference to Figures 4 through 9.

[0055] When multiple users who want to play a common roulette game, a hyper roulette game and a double roulette game which are digital roulette games that have different betting methods turn on the display unit 400, the control unit 500 executes the digital roulette games that have different betting methods and are stored in the memory 530 in a step S402.

[0056] The control unit 500 executes digital roulette games that have different betting methods and displays a 26-inch LCD screen of the display unit 400 for selecting a common roulette game, a hyper roulette game and a double roulette game which are digital roulette games that have different betting methods. When the user enters bills or coins in the amount of money that the user wants to play, the control unit 500 exchanges the entered bills or coins into betting money (credit) and displays the same in a step S404.

[0057] When the user selects a digitally expressed common roulette game in a step S406, the betting screen of Figure 5 is shown. Betting money that the user can use for betting, chips, betting numbers, and various menu information for exchanging into cash are provided at a lower side of the screen in a step S412.

[0058] When the user selects betting money, chips and betting number and places the bet, the time check module 533 of the control unit 500 counts down the betting time in a step S414. When the betting time becomes 0 in a step S416, betting is stopped. The digital wheels expressed with 2D or 3D graphics as shown in Figure 7 are displayed on the display unit 400 by the wheel driving module 534 of the control unit 500 and are driven in a step S418.

[0059] The digital wheels expressed with 2D or 3D graphics are driven by an algorithm provided therein, and an electronic ball starts rolling in a direction reverse to the direction of the digital wheel. The number corresponding to the point at which the electronic ball drops is determined as the winning number in a step S420.

[0060] When the winning number is selected by the digital wheel and electronic ball, the betting module 535 of the control unit 500 compares the betting numbers of the users who played the common roulette game with a winning number in a step S422 and provides each winner with the winning money and payoff rate. The betting module 535 computes the dividends, sums the betting money (credit) and the dividends, and then displays the information on the display unit 400 in a step S424.

[0061] The control unit 500 transmits betting information, roulette information, probability information, etc. concerning a digitally processed common roulette game to the statistic server 300 through the memory 530 or the network 200, and a database of the above information is constructed in a step S426.

[0062] When a user, who played the above game, wants to continue playing the game in a step S428, it go back and perform the step S404. When the user stops the game, the betting money summed with the current betting money (credit) and the dividends are changed into cash and are given to the user in a step S430.

[0063] When the user selects a digitally processed hyper roulette game in a step S408, a certain number and a random region are randomly selected among game betting regions H1 through H6 and 0 through 36 using the previously stored betting information, probability information, etc. The betting screen of Figure 6 is shown. The betting money, chips, betting number, winning

number which can be used by the user and various menu information are shown at a lower side of the screen in a step S412.

[0064] The above process will be described in more detail.

[0065] The digitally processed hyper roulette game comprises a betting screen in which numbers 0 through 36 are randomly arranged on a betting layout of Figure 6. Betting is performed at a desired betting region with reference to the winning numbers of games which have been processed so far. As the range of numbers among the random regions of 0 through 36 decreases, the payoff rate increases. Namely, the payoff rate is different based on the selected betting region. Since each game is randomly adapted, the dividing probability is changed in each game.

[0066] For example, when the user expects that a winning number will be selected from the front numbers with reference to the previous winning numbers and bets 10 dollars for each of betting regions H1, H3, H5, H6, H5~H6, and the winning number turns out to be between 17 through 36, and therefore, in the betting regions H2, H4 the user will lose all five bets placed in that game. But if the winning number turns out to be between 1 through 16, since it belongs to at least one betting region among the betting regions H1, H3, H5, H6, H5~H6, the user will win and receive the dividends based on the corresponding payoff rate.

[0067] When the user bets betting money and chips by selecting at least one betting number and betting region in the betting regions shown on the betting screen, the time check module 533 of the control unit 500 starts counting down the betting time in a step S414; and when the betting time becomes 0 in a step S416, the betting stops. The digital wheel processed with 2D or 3D graphic of Figure 7 is driven and displayed on the display unit 400 by the wheel driving module 534 of the control unit 500 in a step S418.

[0068] The digital wheel processed with 2D or 3D graphics is driven by an algorithm provided therein, and the electronic ball rolls in a direction reverse to the direction of the digital wheel. The number positioned at the point in which the electronic ball drops is determined as a winning number in a step S420.

[0069] When the winning number is determined by the digital wheel and the electronic ball, the betting module 535 of the control unit 500 compares at least one betting number, selected region and winning number of the users who played the hyper roulette game in a step S422, provides the winners with the winning and payoff rate and computes the dividends. The betting module 535 sums the betting money (credit) and the dividends and displays on the display unit 400 in a step S424.

[0070] The control unit 500 transmits betting information, roulette information, probability information, etc. concerning the digitally processed hyper roulette game to the statistic server 300 through the memory 530 or the network 200. A database of the above information is constructed in a step S426.

[0071] When the user who played the digitally processed hyper roulette game wants to continue playing the game in a step S428, it it will go back and perform the step S404. When the game is stopped, the betting money, summed with the current betting money (credit) and dividends, is changed into cash and provided to the user in a step S430.

[0072] When the user selects a digitally processed double roulette game in a step S410, the betting screen of Figure 8 in which numbers from 0 through 14 of the X and Y axes are shown. The betting money, chip, betting number, the previous winning number which can be selected by the user, and other various menu information are displayed at a lower side of the screen in a step S412.

[0073] The above process will be described in more detail.

[0074] As shown in Figure 8, in the digitally processed double roulette game, the user bets by selecting each number among the numbers 0 through 14 of the betting regions of the lines X and Y. In other words, the user can select the numbers 0 to 14 on the line X and the numbers 0 to 14 on the line Y with reference to the winning numbers of the previous double roulette games provided at the upper side of the betting screen. The betting starts when all chips are placed at the point in which each number crosses, and the payoff rate depending on the set of numbers selected for each bet. In this game, the dividends randomly change in each game.

[0075] For example, when the user selects the numbers 1, 3 on the line X and the numbers 2, 4 on the line Y with reference to the winning numbers, the bets are placed at the crosses (1, 2), (1, 4), (3, 2) and (3, 4) which are crossed by each line, and the betting money is identically adapted. As shown in Figure 9, when the cross point of each number obtained on two digital wheels is the same as one point among the betted cross points, the user wins and is provided with dividends based on the corresponding payoff rate.

[0076] When the user selects numbers on the lines X and Y shown on the betting screen and bets with betting money and chips, the time check module 533 of the control unit 500 starts counting down the betting time in a step S414. When the betting time becomes 0 in a step S416, the betting stops. Two digital wheels processed with 2D or 3D graphics of Figure 9 are displayed on the display unit 400 and are driven by the wheel driving module 534 of the control unit 500 in a step S418.

[0077] Two digital wheels processed with 2D or 3D graphics are driven by an algorithm provided therein, and two electronic balls start rolling in a direction reverse to the direction of each digital wheel. The number combination corresponding to the buckets in which the balls drop is determined as the winning number combination in a step S420.

[0078] When the winning number combination is determined by two digital wheels and two electronic balls, the betting module 535 of the control unit 500 compares

at least one betting number and winning number selected on the lines X and Y by the users who played the double roulette game in a step S422. The betting module 535 provides the winning and payoff rate to the winners, computes the dividends, sums the betting money (credit) and dividends and displays this information on the display unit 400 in a step S424.

[0079] The control unit 500 transmits betting information, roulette information, probability information, etc. concerning a digitally processed double roulette game to the statistic server 300 through the memory 530 or the network 200. A database of the above information is constructed in a step S426.

[0080] When the user who played the digitally processed double roulette game wants to continue playing the game in a step S428, it will go back and perform the step S404. When the betting stops, the betting money summed with the current betting money (credit) and the dividends is changed into cash and is provided to the user in a step S430.

[0081] As described above, the digital roulette game provision system that has different betting methods is designed to randomly adapt the payoff rate based on the digital method and to provide a reliable probability. Dealers are not needed in the present invention, so there is no cost for dealers. It is possible to prevent any conflicts between the users and the dealers because the game is performed between the user and the program in the present invention.

[0082] In addition, the present invention provides a digital roulette game that has different betting methods by combining a conventional roulette game with a new game method, so that it is possible to satisfy a user's high expectation with respect to higher and various winning probabilities. With various strategies and tactics, the user can play the game of the present invention with more interest and enough expectations.

[0083] In the present invention, a maximum of 255 users can concurrently play the digital roulette game through the network.

[0084] As the present invention may be embodied in several forms without departing from the spirit or essential characteristics thereof, it should also be understood that the above-described examples are not limited by any of the details of the foregoing description, unless otherwise specified, but rather should be construed broadly within its spirit and scope as defined in the appended claims, and therefore all changes and modifications that fall within the meets and bounds of the claims, or equivalences of such meets and bounds are therefore intended to be embraced by the appended claims.

Claims

1. In a roulette game provision system, a digital roulette game provision system that has different betting methods, comprising:

   a plurality of terminals, with each terminal being designed to provide a digitally processed digital roulette game that has different betting methods, to receive the bills and coins entered by a user who selectively uses a digital roulette game having different betting methods, to display the bills and coins in a form of betting money and chips, to receive statistic information such as betting information, roulette information, probability information, etc. previously stored in a statistic server, to display the above information on a screen, to transmit statistic information such as betting information, roulette information, probability information, etc. to a statistic server through a network based on the operation of a user who selectively uses a digital roulette game that has different betting methods, to select a winning number using a digitally processed digital wheel and an electronic ball, to display a winning state, a payoff rate, dividends and a process result on a screen in accordance with the bet placed by each user with respect to a digital roulette game that has different betting methods, to sum betting money and dividends and provide the same to the user who won a certain amount of dividends as a result of the digital roulette game, and to change the summed money into cash based on a user's selection; and

   a statistic server which provides a plurality of said terminals with statistic information such as betting information, roulette information, probability information, etc. accumulated to users who play a digital roulette game that has different betting methods, receives statistic information such as betting information, roulette information, probability information, etc. of users who play a digital roulette game that has different betting methods received from the terminals and constructs a database using the above information.

2. The system of claim 1, wherein said terminals each comprise:

   a display means which is preferably made of a touch type 26 inch LCD screen and is designed to display a digitally processed digital roulette game that has different betting methods on a LCD screen, to receive digital roulette game menu information selected by a user on the LCD screen, to transmit the received information to a control means, to display the bills and coins entered by the users into betting money and chips in accordance with a process result of the digital roulette game menu information received from the control means, to display statistic information such as previously stored betting information, roulette information, probability information, etc. on the screen, to select a winning

number using a digitally processed digital wheel and an electronic ball, and to display a winning state, a payoff rate, a dividend and a process result on the screen based on a betting of each user with respect to the digital roulette game that has different betting methods; and

a control means that is designed to store and execute a program used for driving a digital roulette game that has different betting methods, to transmit to the display means, to change the bills or coins entered by the users into betting money and chips in accordance with digital roulette game menu information entered from the display means, to provide statistic information such as previously stored roulette information, probability information, betting information, etc. to control betting information, a winning state, a payoff rate, dividends, etc. based on the operations by the users, and to process a result of the digital roulette game that has different betting methods.

3. The system of claim 2, wherein said display means comprises:

a power unit that supplies power to the touch type LCD screen;

a monitor control unit that transmits roulette game menu information entered on the touch type LCD screen to the control means, receives statistic information such as betting information, roulette information, probability information, etc. processed by the control unit, displays on the LCD screen, and outputs a 2D or 3D digital wheel, an electronic ball and a betting screen from the control means to the LCD screen;

a monitor connection unit that is connected with a graphic control unit of the control means and outputs a 2D or 3D digital wheel, an electronic ball and a betting screen from the graphic control unit of the control means to the LCD screen; and

a touch control unit that is connected with the graphic control unit of the control means and converts digital roulette game menu information selected by the users on the touch type LCD screen into position information and transmits to the graphic control unit of the control means.

4. The system of claim 2, wherein said control means comprises:

a main control unit that processes digital roulette game menu information received from the display means, converts the bills or coins entered by the users into betting money and chips, creates statistic information using betting information, roulette information, probability information, etc. entered through the display means, controls betting information, a winning state, a payoff rate, dividends, etc. based on the operations of the users, and processes and controls a result of the digital roulette game that has different betting methods;

a memory that stores a program concerning the digital roulette game that has different betting methods, executes the digital roulette game that has different betting methods in accordance with control from the main control unit, and stores statistic information created using the betting information, roulette information, probability information, etc;

a graphic control unit that transmits digital roulette game menu information from the display means to the main control unit and transmits a graphic screen to the display means in accordance with control from the main control unit, with the graphic screen being formed of a betting screen, a 2D or 3D digital wheel and an electronic ball, etc. which are needed for the digital roulette game that has different betting methods; and

an audio input and output unit that outputs various audio signals such as a background music, voice, etc. to the outside in accordance with the digital roulette game that has different betting methods.

5. The system of claim 2, wherein said control means comprises:

a control module that drives a common roulette game implemented in a digital method in accordance with a user's selection, a hyper roulette game in which a betting is performed by randomly selecting a number from 0 through 36 and a region, and a double roulette game in which a betting is performed by selecting double numbers from 0 through 14 and double regions, with the control module processing and controlling betting information, a winning state, a payoff rate, dividends, etc. in accordance with the operations of the users, and with the control module processing and controlling a result of the digital roulette game that has different betting methods;

a game selection module that displays a digitally processed common roulette game, hyper roulette game, and double roulette game on a screen so that the user can select a certain game and executes the corresponding digital roulette game based on the user's selection;

a time check module that checks a determined betting time based on a digital roulette game selected by the user;

a wheel driving module in which a winning number is determined by rotating one digital

wheel and an electronic ball in a common roulette game and a hyper roulette game, with the common roulette game being designed to create a 2D or 3D graphic betting screen, digital wheel and electronic ball in accordance with the game selection module, and with the hyper roulette game designed to bet by selecting a number from 0 through 36 and a region, and in which a winning number is determined by rotating two digital wheels and two electronic balls in the double roulette game that selects double numbers from 0 through 14 and double regions;

a betting module in which a winning number is compared using at least one betting number in a common roulette game and a hyper roulette game, with the common roulette game being selected by a user on a 2D or 3D graphic betting screen in accordance with the game selection module, and with the hyper roulette game being played by betting on a number from 0 through 36 and a region, and in which a winning number is compared using betting numbers in double regions formed of two numbers in a double roulette game in which users place bets by selecting double numbers from 0 through 14 and double regions, and thereby computing the corresponding payoff rate and the dividends based on the above winning; and

a money exchange module which changes the bills and coins entered by the users into betting money (credit), sums the dividends paid in accordance with the computation of the betting module with the betting money, and changes the sum into cash.

6. In a roulette game provision system, a digital roulette game provision system that has different betting methods, comprising:

a terminal that is designed to provide a digitally processed digital roulette game that has different betting methods, to receive the bills and coins entered by a user who selectively uses the digital roulette game that has different betting methods, to display the bills and coins in a form of betting money and chips, to display statistic information such as previously stored betting information, roulette information, probability information, etc. on a screen, to store statistic information such as betting information, roulette information, probability information, etc. based on the operations by users who selectively use the digital roulette game that has different betting methods, to select a winning number using a digitally processed digital wheel and an electronic ball, to display a winning state, a payoff rate, dividends and a process result on a screen in accordance with the bet placed by each user with respect to a digital roulette game that has different betting methods, to sum a betting money and dividends and provide this information to the user who obtains a certain amount of dividends in accordance with a result of the digital roulette game, and to change the sum into cash based on a user's selection.

7. The system of claim 6, wherein said terminals each comprise:

a display means which is preferably made of a touch type 26 inch LCD screen and is designed to display a digitally processed digital roulette game that has different betting methods on a LCD screen, to receive digital roulette game menu information selected by a user on the LCD screen, to transmit the received information to a control means, to display the bills and coins entered by the users into betting money and chips in accordance with a process result of the digital roulette game menu information received from the control means, to display statistic information such as previously stored betting information, roulette information, probability information, etc. on the screen, to select a winning number using a digitally processed digital wheel and an electronic ball, and to display a winning state, a payoff rate, a dividend and a process result on the screen based on a betting of each user with respect to the digital roulette game that has different betting methods; and

a control means that is designed to store and execute a program used for driving a digital roulette game that has different betting methods, to transmit to the display means, to change the bills or coins entered by the users into betting money and chips in accordance with digital roulette game menu information entered from the display means, to provide statistic information such as previously stored roulette information, probability information, betting information, etc. to control betting information, a winning state, a payoff rate, dividends, etc. based on the operations by the users, and to process a result of the digital roulette game that has different betting methods.

8. The system of claim 7, wherein said display means comprises:

a power unit that supplies power to the touch type LCD screen;

a monitor control unit that transmits roulette game menu information entered on the touch type LCD screen to the control means, receives statistic information such as betting information, roulette information, probability information, etc.

processed by the control unit, displays on the LCD screen, and outputs a 2D or 3D digital wheel, an electronic ball and a betting screen from the control means to the LCD screen;

a monitor connection unit that is connected with a graphic control unit of the control means and outputs a 2D or 3D digital wheel, an electronic ball and a betting screen from the graphic control unit of the control means to the LCD screen; and

a touch control unit that is connected with the graphic control unit of the control means and converts digital roulette game menu information selected by the users on the touch type LCD screen into position information and transmits to the graphic control unit of the control means.

9. The system of claim 7, wherein said control means comprises:

a main control unit that processes digital roulette game menu information received from the display means, converts the bills or coins entered by the users into betting money and chips, creates statistic information using betting information, roulette information, probability information, etc. entered through the display means, controls betting information, a winning state, a payoff rate, dividends, etc. based on the operations of the users, and processes and controls a result of the digital roulette game that has different betting methods;

a memory that stores a program concerning the digital roulette game that has different betting methods, executes the digital roulette game that has different betting methods in accordance with control from the main control unit, and stores statistic information created using the betting information, roulette information, probability information, etc;

a graphic control unit that transmits digital roulette game menu information from the display means to the main control unit and transmits a graphic screen to the display means in accordance with control from the main control unit, with the graphic screen being formed of a betting screen, a 2D or 3D digital wheel and an electronic ball, etc. which are needed for the digital roulette game that has different betting methods; and

an audio input and output unit that outputs various audio signals such as a background music, voice, etc. to the outside in accordance with the digital roulette game that has different betting methods.

10. The system of claim 7, wherein said control means comprises:

a control module that drives a common roulette game implemented in a digital method in accordance with a user's selection, a hyper roulette game in which a betting is performed by randomly selecting a number from 0 through 36 and a region, and a double roulette game in which a betting is performed by selecting double numbers from 0 through 14 and double regions, with the control module processing and controlling betting information, a winning state, a payoff rate, dividends, etc. in accordance with the operations of the users, and with the control module processing and controlling a result of the digital roulette game that has different betting methods;

a game selection module that displays a digitally processed common roulette game, hyper roulette game, and double roulette game on a screen so that the user can select a certain game and executes the corresponding digital roulette game based on the user's selection;

a time check module that checks a determined betting time based on a digital roulette game selected by the user;

a wheel driving module in which a winning number is determined by rotating one digital wheel and an electronic ball in a common roulette game and a hyper roulette game, with the common roulette game being designed to create a 2D or 3D graphic betting screen, digital wheel and electronic ball in accordance with the game selection module, and with the hyper roulette game designed to bet by selecting a number from 0 through 36 and a region, and in which a winning number is determined by rotating two digital wheels and two electronic balls in the double roulette game that selects double numbers from 0 through 14 and double regions;

a betting module in which a winning number is compared using at least one betting number in a common roulette game and a hyper roulette game, with the common roulette game being selected by a user on a 2D or 3D graphic betting screen in accordance with the game selection module, and with the hyper roulette game being played by betting on a number from 0 through 36 and a region, and in which a winning number is compared using betting numbers in double regions formed of two numbers in a double roulette game in which users place bets by selecting double numbers from 0 through 14 and double regions, and thereby computing the corresponding payoff rate and the dividends based on the above winning; and

a money exchange module which changes the bills and coins entered by the users into betting money (credit), sums the dividends paid in accordance with the computation of the betting

module with the betting money, and changes the sum into cash.

Fig. 1

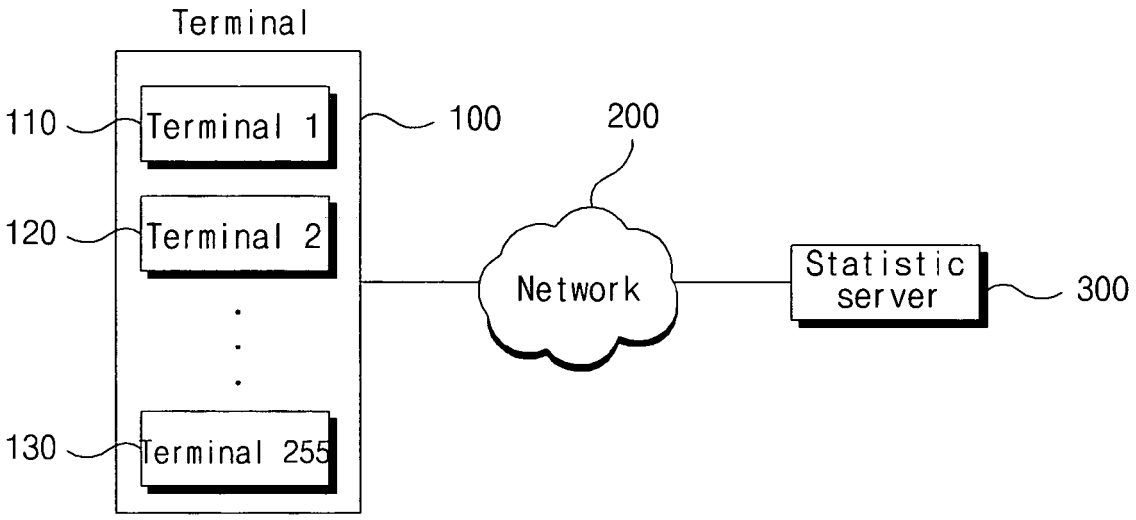

Terminal
110
Terminal 1
100
200
120
Terminal 2
Network
Statistic server
300
130
Terminal 255

Fig. 2

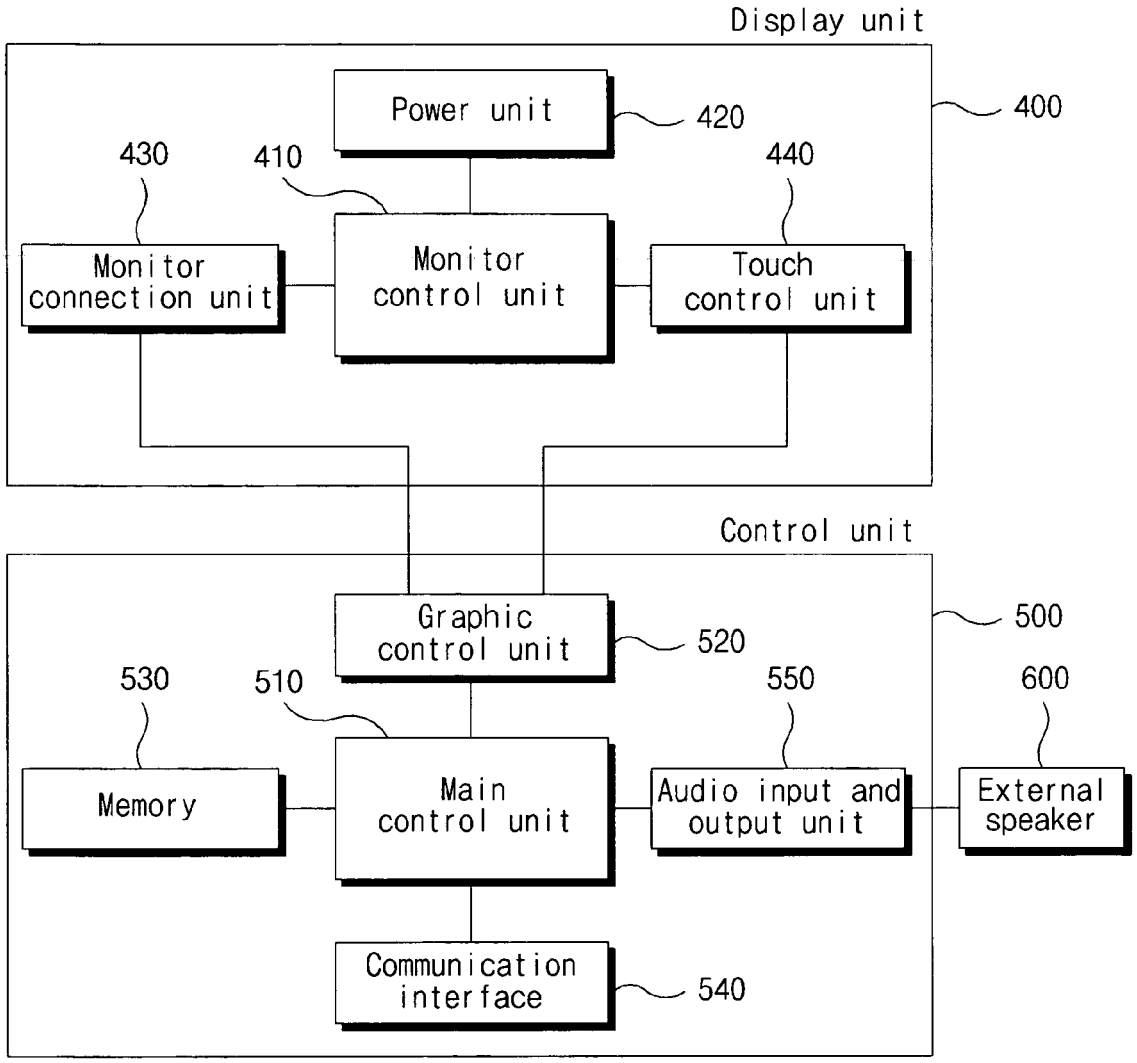

Display unit
Power unit
420
400
430
410
440
Monitor connection unit
Monitor control unit
Touch control unit
Control unit
Graphic control unit
520
500
530
510
550
600
Memory
Main control unit
Audio input and output unit
External speaker
Communication interface
540

Fig. 3

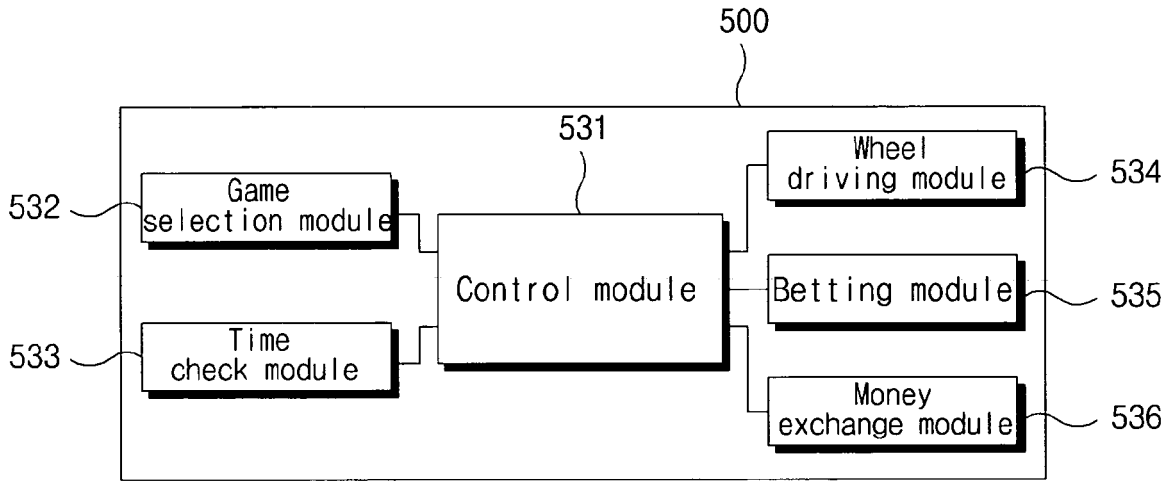

500
531
532
Game selection module
533
Time check module
Control module
Wheel driving module
534
Betting module
535
Money exchange module
536

Fig. 4

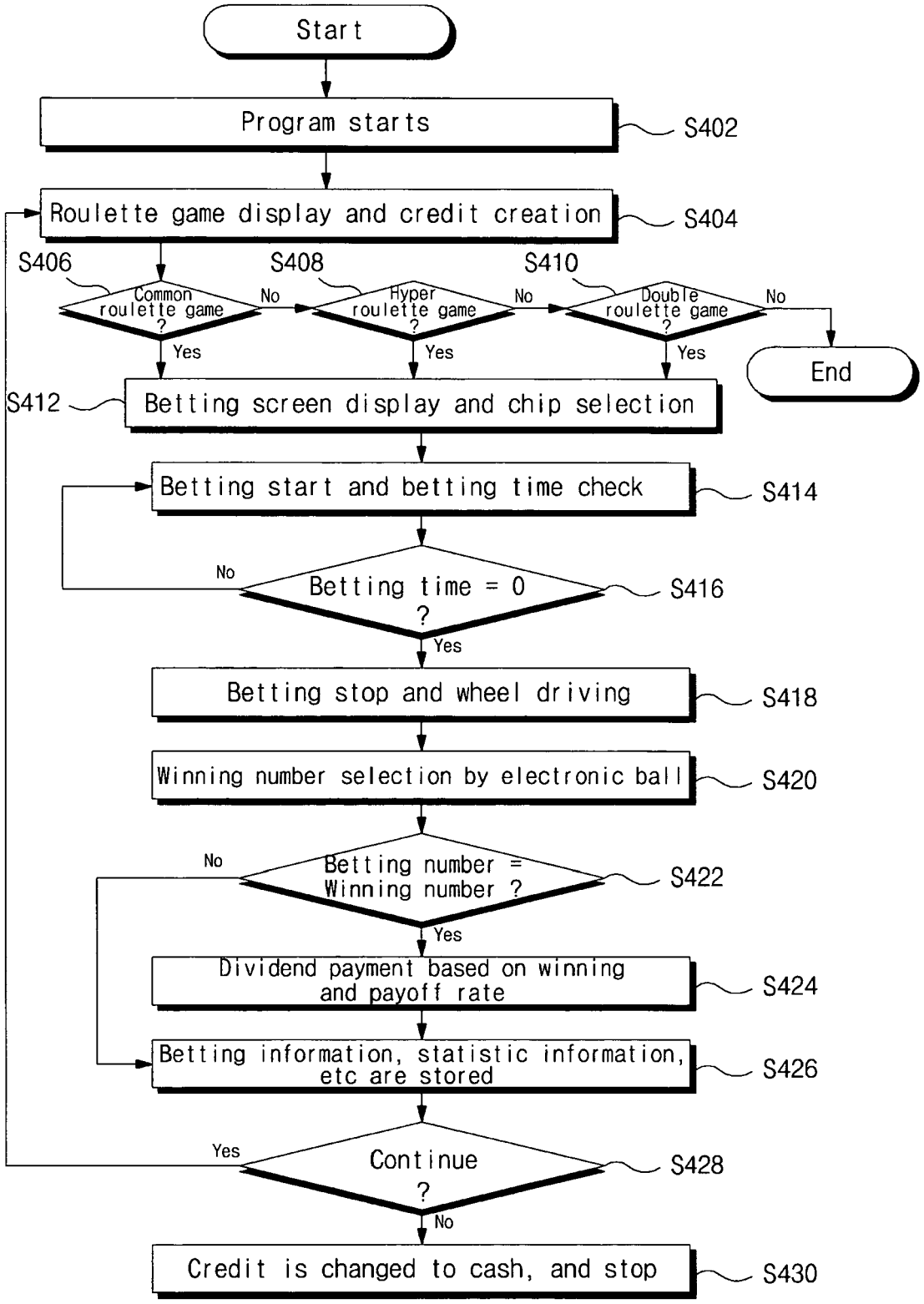

Start
Program starts
S402
Roulette game display and credit creation
S404
S406
Common roulette game ?
No
S408
Hyper roulette game ?
No
S410
Double roulette game ?
No
End
Yes
Yes
Yes
S412
Betting screen display and chip selection
Betting start and betting time check
S414
No
Betting time = 0 ?
S416
Yes
Betting stop and wheel driving
S418
Winning number selection by electronic ball
S420
No
Betting number = Winning number ?
S422
Yes
Dividend payment based on winning and payoff rate
S424
Betting information, statistic information, etc are stored
S426
Yes
Continue ?
S428
No
Credit is changed to cash, and stop
S430

Fig. 5

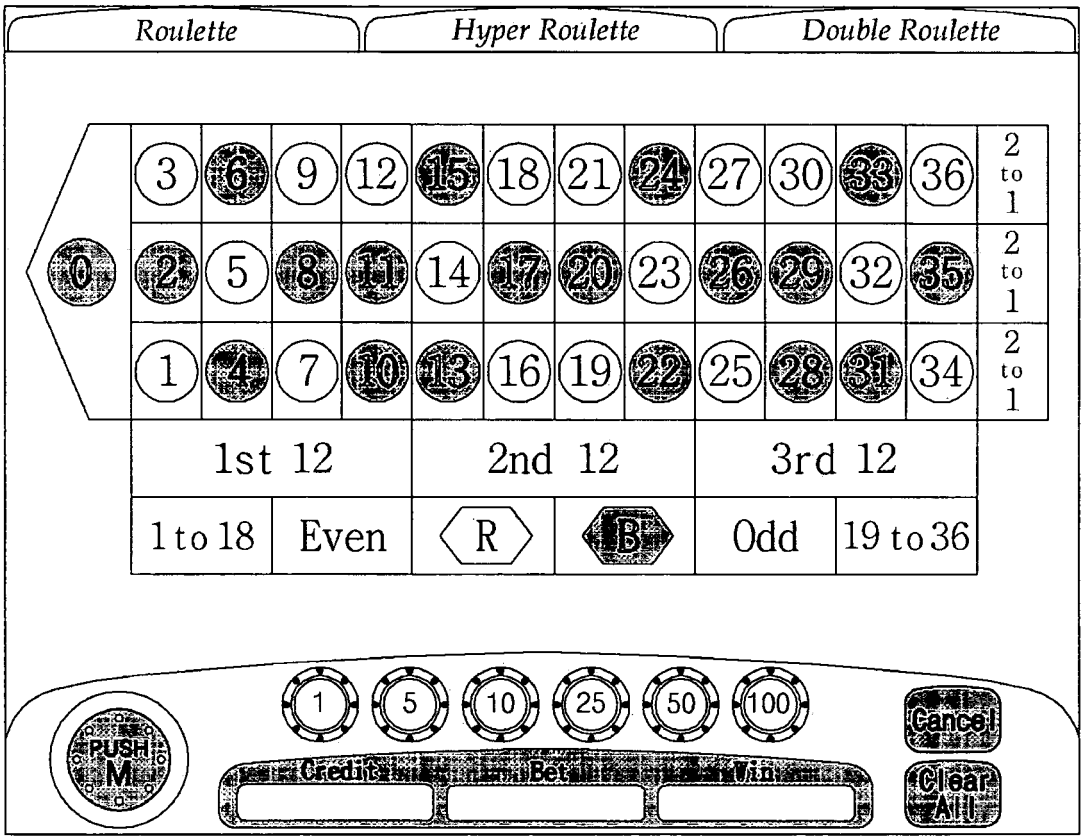

Roulette
Hyper Roulette
Double Roulette
0
3 6 9 12 15 18 21 24 27 30 33 36
2 5 8 11 14 17 20 23 26 29 32 35
1 4 7 10 13 16 19 22 25 28 31 34
2 to 1
2 to 1
2 to 1
1st 12
2nd 12
3rd 12
1 to 18
Even
R
B
Odd
19 to 36
PUSH
1
5
10
25
50
100
Credit
Bet
Win
Cancel
Clear All

Fig. 6

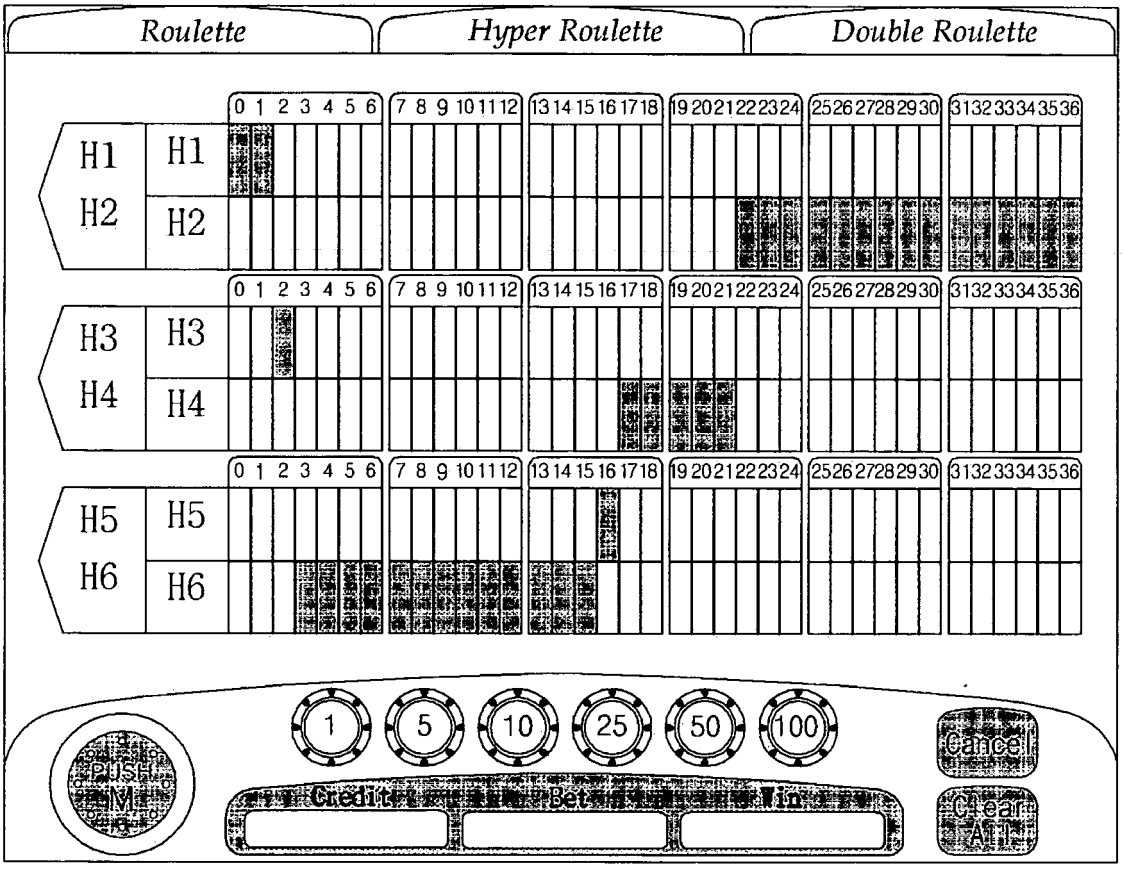

Roulette
Hyper Roulette
Double Roulette
0 1 2 3 4 5 6
7 8 9 10 11 12
13 14 15 16 17 18
19 20 21 22 23 24
25 26 27 28 29 30
31 32 33 34 35 36
H1
H2
H3
H4
H5
H6
1
5
10
25
50
100
Cancel
Clear All
Credit
Bet
Win

Fig. 7

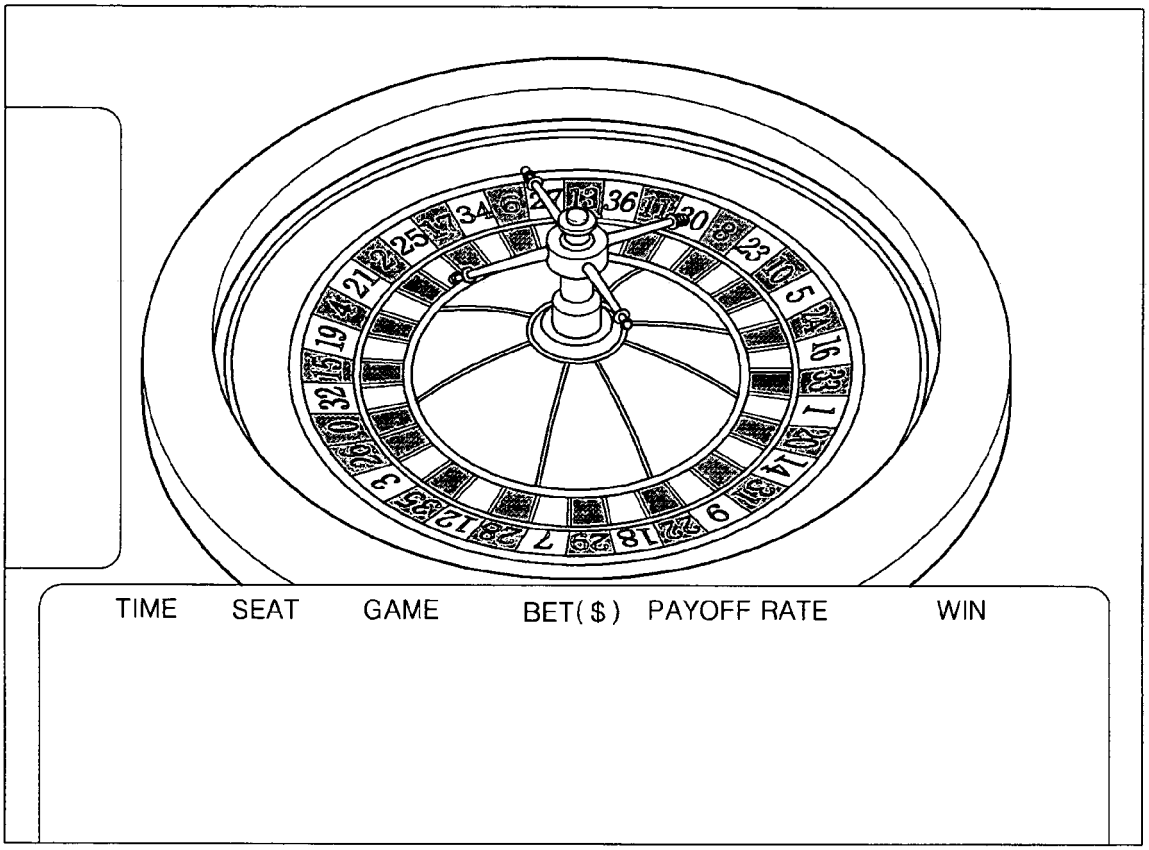


Fig. 8

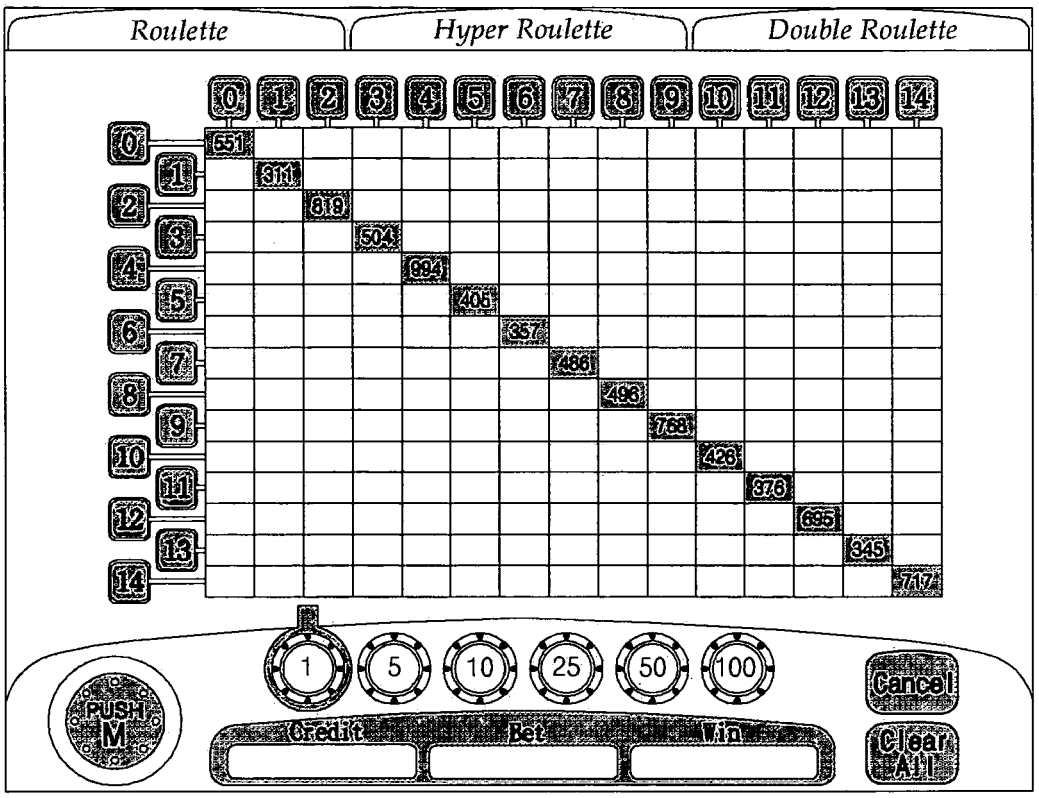
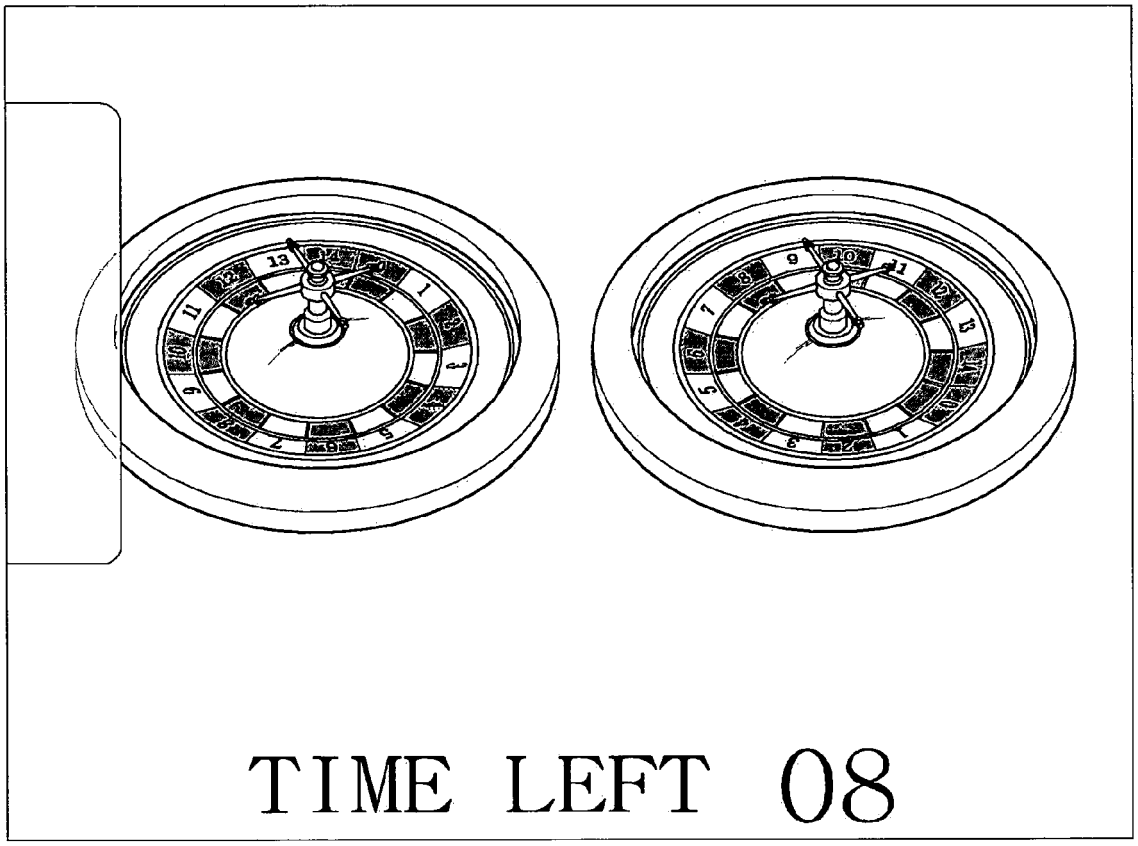

Roulette
Hyper Roulette
Double Roulette
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14
551
311
819
504
994
405
357
466
493
768
426
376
695
345
717
1 5 10 25 50 100
PUSH
Credit
Bet
Win
Cancel
Clear All

Fig. 9



European Patent Office

EUROPEAN SEARCH REPORT

Application Number
EP 06 01 8514

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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X	GB 2 415 272 A (INSPIRED BROADCAST NETWORKS LT [GB]) 21 December 2005 (2005-12-21) * abstract * * figures 1,3-7 * * page 1, line 3 - line 5 * * page 4, line 11 - page 16, line 3 *	1-10	
X	WO 99/19027 A2 (BLACK GERALD R [US]; RACHO R GENE [US]) 22 April 1999 (1999-04-22) * the whole document *	1-10	TECHNICAL FIELDS SEARCHED (IPC)
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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	31 July 2007	Kling, Jonas

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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A : technological background
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T : theory or principle underlying the invention
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L : document cited for other reasons

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ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 06 01 8514

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82