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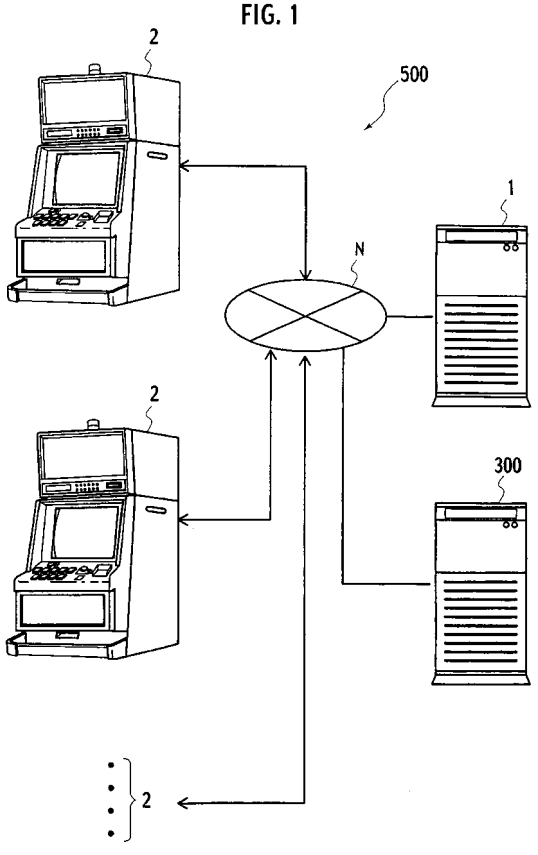
(54) Gaming management system

(57) A gaming management system (500) comprises a network (N), a gaming machine (2), an insurance management server (1) and a membership management server (300). The gaming machine (2) executes a game. The insurance management server (1) manages insurance information with respect to gaming insurance and is connected to the gaming machine (2) via the network (N). The membership management server (300) manages membership information and is connected to the insurance management server (1) via the network (N).

FIG. 1



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Description

BACKGROUND OF THE INVENTION

1. Field of the Invention

[0001] The present invention relates to a gaming management system configured to manage gaming insurance against loss resulting from player's betting action.

2. Description of the Related Art

[0002] A conventional gaming machine with an insurance function is disclosed in Japanese Patent Laid-open Publication No. H04-244178. In this gaming machine, a player inserts one or more insurance coins into a coin insertion slot of the gaming machine before starting to play a game. The gaming machine pays out the predetermined number of gaming coins for insurance regardless of win and loss when the player spends the predetermined number of gaming coins on the game. This reduces player's loss.

[0003] However, this insurance function can not provide various services according to player's request because it is limited to contents preliminarily set in a gaming machine into which the insurance coin will be inserted.

[0004] The gaming machine further has one insurance coin passageway for guiding it to a hopper thereof and another insurance coin passageway for guiding it to a coin ejection slot thereof. Therefore, the volume of the gaming machine increases because the gaming machine has two insurance coin passageways therein.

SUMMARY OF THE INVENTION

[0005] It is an object of the present invention to provide a gaming management system capable of flexibly providing various insurance services against loss resulting from player's betting action according to player's request.

[0006] It is another object of the present invention to provide a gaming management system including a gaming machine configured to decrease in the volume of the gaming machine.

[0007] In order to achieve the object, the present invention provides a gaming management system comprising: a network; a gaming machine configured to execute a game; an insurance management server configured to manage insurance information with respect to gaming insurance and connected to the gaming machine via the network; and a membership management server configured to manage membership information and connected to the insurance management server via the network, wherein the gaming machine comprises: a card unit conf igured to read a player ID number from a membership card and send the read player ID number to the insurance management server; an executing means for executing the game when the membership card is inserted into the card unit; and a generating means for generating gaming result information with respect to the game executed by the executing means and send the generated gaming result information to the insurance management server; the membership management server comprises: a membership information storage configured to store membership information corresponding to the player ID number read by the card unit; and a sending means for sending the corresponding membership information to the insurance management server; and the insurance management server comprises: an insurance information storage configured to store insurance information corresponding to the player ID number read by the card unit; a payout determing means for determining whether or not the insurance management server pays out insurance according to the read player ID number, the generated gaming result information and the corresponding insurance information; and a continuation determing means for determining whether or not the insurance management server continues the gamimg insurance according to the corresponding insurance information when the gaming insurance expires.

[0008] According to the present invention, the payout determining unit of the insurance management server determines whether or not insurance is paid out, according to the generated gaming result information and the corresponding insurance condition. Therefore, the gaming management system can flexibly provide various insurance services against loss resulting from player's betting action according to player's request. Further, in this gaming management system, the gaming machine needs not to be provided with any inscurance coin passageway. Therefore, the gaming management system can include the gaming machine configured to decrease in the volume of the gaming machine.

[0009] In order to achieve the object, the present invention provides a gaming management system comprising: a network; a gaming machine configured to execute a game; an insurance management server configured to manage insurance information with respect to gaming insurance and connected to the gaming machine via the network; and a membership management server configured to manage membership information and connected to the insurance management server via the network, wherein the gaming machine comprises: a card unit configured to read a player ID number from a membership card and send the read player ID number to the insurance management server; an executing means for executing the game when the membership card is inserted into the card unit; and a generating means for

generating gaming result information with respect to the game executed by the executing means and send the generated gaming result information to the insurance management server; the membership management server comprises: a membership information storage configured to store membership information corresponding to the player ID number read by the card unit; and a sending means for sending the corresponding membership information to the insurance management server; and the insurance management server comprises: an insurance information storage configured to store insurance information corresponding to the player; an identifying means for reading identification information corresponding to the player from the corresponding membership information according to the read player ID number; a payout determing means for determining whether or not the insurance management server pays out insurance according to the read identification information, the generated gaming result information and the corresponding insurance information; and a continuation determing means for determining whether or not the insurance management server continues the gamimg insurance according to the corresponding insurance information when the gaming insurance expires.

[0010] According to the present invention, the payout determining unit of the insurance management server determines whether or not insurance is paid out, according to the generated gaming result information and the corresponding insurance condition. Therefore, the gaming management system can flexibly provide various insurance services against loss resulting from player' s betting action according to player's request. Also, the identifying unit reads the identification information corresponding to the player from the corresponding membership information according to the read player ID number. Therefore, the player needs not to purchase the gaming insurance after joining the membership. As a result, a gaming insurance purchase procedure can be independent from a membership join procedure. This improves convenience of purchasing the gaming insurance. Further, in this gaming management system, the gaming machine needs not to be provided with any inscurance coin passageway. Therefore, the gaming management system can include the gaming machine configured to decrease in the volume of the gaming machine.

BRIEF DESCRIPTION OF THE DRAWINGS

[0011]

FIG. 1 is a schematic diagram of a gaming management system according to an exemplary embodiment of the present invetion.

FIG. 2 is a block diagram of a control circuit incorporated into an insurance management server according to the exemplary embodiment of the present invention.

FIG.3 is a block diagram of a control circuit incorporated into a membership management server according to the exemplary embodiment of the present invention.

FIG.4 is a perspective view of a gaming machine according to the exemplary embodiment of the present invention.

FIG.5 is a block diagram of a main control circuit incorporated into the gaming machine according to the exemplary embodiment of the present invention.

FIG.6 is a block diagram of a display control device of the gaming machine according to the exemplary embodiment of the present invention.

FIG.7A is a flowchart of a control process of the first half executed in the gaming management system according to the exemplary embodiment of the present invention.

FIG.7B is a flowchart of a control process of the second half executed in the gaming management system according to the exemplary embodiment of the present invention.

FIG.8A is a flowchart of a modified control process of the first half executed in the gaming management system according to the exemplary embodiment of the present invention.

FIG.8B is a flowchart of a modified control process of the second half executed in the gaming management system according to the exemplary embodiment of the present invention.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0012] Hereinafter, an exemplary embodiment of the present invention will be described with reference to FIGS.1 to 8B.

[0013] In the exemplary embodiment, a gaming management system comprises a plurality of gaming machines, a membership management server, an insurance management server and a network. The gaming machine has a card unit and is connected to the membership management server and the insurance management server via the network.

[0014] The card unit reads a player ID number stored in a membership card when the membership card is inserted into the card unit. The gaming machine can identify a player who plays a game in the gaming machine by means of the player ID number stored in the inserted membership card because the player ID number corresponds one-to-one with the player.

[0015] The membership management server stores membership information (e.g. a name, an address, a birthday, biological information, and/or an account number) of the player which is related to the player ID number. The membership

management server manages the membership information every player who has taken part in the membership.

[0016] The insurance management server stores a gaming insurance condition of the player which is related to the player ID number. The gaming insurance is insurance against loss resulting from player's betting action and covers the loss with insurance payment according to the insurance payment condition. The insurance payment condition usually differs from one player to another player. Therefore, the insurance management server manages the gaming insurance condition every player.

[0017] The insurance management server automatically executes a series of processes from insurance application to insurance payment. In the series of processes, the insurance managemet server obtains a player ID number from the card unit of the gaming machine in which the player plays the game, and then obtains membership information of the player from the membership management server by means of the obtained player ID number and obtains gaming result information of the player from the gaming machine by means of the obtained player ID number, in order to refer to the gaming insurance condition, the account number, the gaming result information, or the like of the player.

[0018] In the exemplary embodiment, a gaming coin means a real coin that circulates in a country in which a player plays a game, or a gaming medal (token) that circulates in a gaming-hall in which the player plays the game and is obtained by exchanging money of a country in which the gaming-hall is placed.

(Configuration of gaming management system)

[0019] As shown in FIG.1, the gaming management system 500 comprises the insurance management server 1, the plurality of gaming machines 2, the membership management server 300 and the network N. The gaming machines 2 are connected to the insurance management server 1 and the membership management server 300 via the network N. The gaming machines 2 send /receive various data to/from the insurance management server 1 or the membership management server 300 through the network N.

[0020] Each gaming machine 2 has a unique machine ID number. The insurance management server 1 and the membership management server 300 store the machine ID numbers assigned to the gaming machines 2 therein. The insurance management server 1 and the membership management server 300 identify a source of received data by checking the machine ID number attached to the received data against the machine ID numbers stored therein. Also, the insurance management server 1 and the membership management server 300 identify a destination of data to be sent through the machine ID number stored therein.

(Configuration of insurance management server)

[0021] As shown in FIG.2, the insurance management server 1 comprises a central processing unit (CPU) 10, an input-output (I/O) bus 12, a read only memory (ROM) 14, a random access memory (RAM) 16, a hard disk drive (HDD) 18, a communication interface circuit 22, a display monitor 24 and an input device 26.

[0022] The CPU 10 is connected to the ROM 14, the RAM 16, the HDD 18, the communication interface circuit 22, the display monitor 24 and the input device 26 via the I/O bus 12. A data signal or an address signal is input into or output from the CPU 10 through the I/O bus 12.

[0023] The ROM 14 stores a control program to be used to control the insurance management server 1 therein. The RAM 16 temporarily stores a flag, a variable value or the like used by the control program. Also, the RAM 16 temporarily stores a player ID number sent from the card unit 400 of the gaming machine 2, membership information sent from the membership management server 300, gaming result information sent from the gaming machine 2, an insurance payment list and the gaming insurance condition stored in the HDD 18, and the like therein.

[0024] The HDD 18 stores the insurance payment list and a database of the gaming insurance conditions which are related to the player ID numbers respectively therein. It is noted that the HDD 18 may be replaced with a high-capacity nonvolatile rewritable memory device (e.g. flash memory). The communication interface circuit 22 is connected to the gaming machines 2 and the membership management server 300 via the network N which is a communication line of a public telephone line network, a local area network (LAN) or the like.

[0025] The display monitor 24 displays various data (e.g. the gaming insurance conditions stored as the database in the HDD 18). The input device 26 sends an order signal for ordering the display monitor 24 to display the gaming insurance condition of related player, an order signal for ordering the HDD 18 to store a new gaming insurance condition of related player or the like to the insurance management server 1.

(Configuration of membership management server)

[0026] As shown in FIG.3, the membership management server 300 comprises a CPU 310, an I/O bus 312, a ROM 314, a RAM 316, a HDD 318, a communication interface circuit 322, a display monitor 324 and an input device 326.

[0027] The CPU 310 is connected to the ROM 314, the RAM 316, the HDD 318, the communication interface circuit

322, the display monitor 324 and the input device 326 via the I/O bus 312. A data signal or an address signal is input into or output from the CPU 310 through the I/O bus 312.

[0028] The ROM 314 stores a control program to be used to control the membership management server 300 therein. The RAM 316 temporarily stores a flag, a variable value or the like used by the control program. Also, the RAM 316 temporarily stores a player ID number sent from the insurance management server 1, membership information stored in the HDD 318 and the like therein.

[0029] The HDD 318 stores a database of pieaces of the membership information (e.g. a name, an address, a birthday, biological information, and/or an account number) which are related to the player ID numbers respectively therein. It is noted that the HDD 318 may be replaced with a high-capacity nonvolatile rewritable memory device (e.g. flash memory). The communication interface circuit 322 is connected to the gaming machines 2 and the insurance management server 1 via the network N. The membership management server 1 is a parent station of the gaming machines 2 and has a unique machine ID number "0000" .

[0030] The display monitor 324 displays various data (e.g. the membership information stored as the database in the HDD 318). The input device 326 sends an order signal for ordering the display monitor 324 to display the membership information of related player, an order for ordering the HDD 318 to store new membership information of related player or the like, to the membership management server 300.

(Configuration of gaming machine)

[0031] As shown in FIG. 4 , the gaming machine 2 comprises a cabinet 30, a main display device 32, an upper sub-display device 34, a lower sub-display device 38, a plurality of switches 40, a cross shape switch 42, a coin insertion slot 44, a bill insertion slot 46, a payback switch 48, a base portion 50, a coin payout slot 52, a coin receiving portion 54, a notifying lamp 56 and the card unit 400.

[0032] The cabinet 30 forms the entirety of the gaming machine 2. The main display device 32 is mounted on a front center portion of the cabinet 30 which slightly slants to rearward of the cabinet 30. The main display device 32 displays gaming information of a game to proceed with the game.

[0033] The upper sub-display device 34 is mounted on a front upper portion of the cabinet 30. The upper sub-display device 34 displays gaming information not to be displayed in a screen of the main display device 32, a rule of the game with which the main display device 32 proceeds or the like. The lower sub-display 38 is mounted on a front lower portion of the cabinet 30. The lower sub-display device 38 also displays various information of the game.

[0034] The base portion 50 is flatly formed in a boundary portion of the cabinet 30 between the front center portion and the front lower portion of the cabinet 30. The plurality of switches 40 and the cross shape switch 42 are mounted on a left side of the base portion 50. These switches are operated when a player selects or determines one option among options in the game. The coin insertion slot 44 and the bill insertion slot 46 are mounted on a right side of the base portion 50. A player can play the game when inserting one or more coins or bills into the coin insertion slot 44 or the bill insertion slot 46.

[0035] The payback switch 48 is mounted on the right side of the base portion 50 in the vicinity of the coin insertion slot 44. The coin payout slot 52 is mounted on the front lower portion of the cabinet 30 below the lower sub-display device 38. The coin receiving portion 54 extends from the front lower portion of the cabinet 30. One or more inserted coins are paied back from the coin payout slot 52 and then received at the coin receiving portion 54 when a player operates the payback switch 48. The notifying lamp 56 is operated when abnormality of the gaming machine 2 occurs. The notifying lamp 56 blinks or lights up to notify a clerk in a gaming holl of the abnormality.

[0036] The card unit 400 is mounted on a boundary portion of the cabinet 30 between the front upper portion and the front center portion of the cabinet 30. The card unit 400 comprises a plurality of buttons 401, a card slot 402, a display monitor 403 and a reader/writer 404 (see FIG. 4 and 5). The plurality of buttons 401 and the display monitor 403 are operated when a player inputs a secret number or ejects an inserted membership card. The membership card is inserted into or ejected from the card slot 402. In the exemplary embodiment, although an IC card is employed as the membership card to read or write pieaces of information by means of the reader/writer 404, the IC card may be replaced with another member (e.g. magnetic card) capable of storing pieaces of information including at least participation /non-participation in the gaming insurance and the player ID number which is read by the reader/writer 404.

(Configuration of control device of gaming machine)

[0037] As shown in FIG. 5, the gaming machine 2 further comprises a coin detection sensor 58, a bill detection sensor 59, a main control circuit 60, a speaker 80, a payout device 82 and a display control device 200. The main conrol circuit 60 comprises an interface circuit 62, an input/output bus 64, a CPU 66, a ROM 68, a RAM 70, an interface circuit 72, a hard disk drive 74, a communication interface circuit76, a random number generator 78 and an interface circuit 405.

[0038] The switches 40 and the cross shape switch 42 are connected to the interface circuit 62. The interface circuit

62 is connected to the CPU 66 via the input/output bus 64. Each switch generates a detection signal and then inputs it into the CPU 66 via the input/output bus 64 when being operated.

[0039] The coin detection sensor 58 and the bill detection sensor 59 are connected to the interface circuit 62. The coin detection sensor 58 converts information regarding the type of inserted coin and the number of inserted coins into a signal and then inputs it into the CPU 66 via the input/output bus 64 when detecting one or more coins inserted into the coin insertion slot 44. The bill detection sensor 59 converts information regarding the type of inserted bill and the number of inserted bills into a signal and then inputs it into the CPU 66 via the input/output bus 64 when detecting one or more bills inserted into the bill insertion slot 46.

[0040] The payback switch 48 is connected to the interface circuit 62. The payback switch 48 generates a detection signal and then inputs it into the CPU 66 via the input/output bus 64 when being operated. One or more inserted coins are paied back from the coin payout slot 52 on the basis of the generated detection signal.

[0041] The ROM 68 and the RAM 70 are connected to the input/output bus 64. The ROM 68 stores a unique machine ID number of the gamine machine 2, a main control program for controlling the gaming machine 2, an initialization data for executing the control program, a part of a display control program for controlling the main display device 32, the upper sub-display device 34 and the lower sub-display device 38 and the like therein. The RAM 70 temporarily stores the main control program, the display control program, a flag used in a gaming program, a variable value used in the gaming program or the like therein.

[0042] The hard disk drive 74 is connected to the input/output bus 64. The hard disk drive 74 stores the gaming program and the like therein. In the exemplary embodiment, although the hard disk drive 74 is employed as a storage device for storing the gaming program, it may be replaced with a high-capacity involatile rewritable storage device (e.g. flash memory).

[0043] The notifying lamp 56, the speaker 80 and the payout device 82 are connected to the interface circuit 72. The interface circuit 72 is connected to the CPU 66 via the input/output bus 64. The interface circuit 72 outputs a driving signal or a driving electric power into the notifying lamp 56, the speaker 80 or the payout device 82 accroding to a result of arithmetic processing in the CPU 66.

[0044] The random number generator 78 is connected to the input/output bus circuit 64. The random number generator 78 generates a random number within a predetermined range and then inputs a signal including the generated random number into the input/output bus 64 when the CPU 66 inputs into the random number generator 78 an order for generating a random number. The CPU 66 determines a gaming status on the basis of the generated random number. The generated random number is stored as a lottery result data in the RAM 70.

[0045] The communication interface circuit 76 is connected to the input/output bus 64. The communication interface circuit 76 communicates with the insurance mangament server 1 and the membership management server 300 via the network N.

[0046] The buttons 401, the display monitor 403 and the reader/writer 404 of the card unit 400 are connected to the interface circuit 405. The interface circuit 405 is connected to the CPU 66 via the input/output bus 64. The interface circuit 405 outputs a driving signal or a driving electric power into the display monitor 403 or the reader/writer 404 accroding to a result of arithmetic processing in the CPU 66.

[0047] Each button 401 generates a detection signal and then inputs it into the interface circuit 405 when being operated. The display monitor 403 displays an image according to a display order output from the CPU 66 via the interface circuit 405. The reader/writer 404 converts information regarding a player ID number or participation/non-participation in the gaming insurance stored in the membership card (IC card) into a signal and then inputs it into the interface circuit 405 when the membership card is inserted into the card slot 402. In a case where a magnetic card is employed as the membership card, the reader/writer 404 is replaced with a magnetic card reader.

[0048] The display control device 200 is connected to the interface circuit 72. The display control device 200 outputs a driving signal or a driving electric power into the main display device 32, the upper sub-display device 34 or the lower sub-display device 38 accroding to an image display order which is output from the main control circuit 60.

(Configuration of display control device of gaming machine)

[0049] As shown in FIG. 6, the display control device 200 comprises an interface circuit 202, an input/output bus 204, a CPU 206, a ROM 208, a RAM 210, a VDP (video data processor) 212, a video RAM 214, a video ROM 216, a first driving circuit 218, a second driving circuit 220 and a third driving circuit 222. The interface circuit 202 is connected to the input/output bus 204. The image display order which is output from the main control circuit 60 is input into the input/output bus 204 via the interface circuit 202.

[0050] The CPU 206, the ROM 208 and the RAM 210 are connected to the input/output bus 204. A data signal or an address signal is input into or output from the CPU 206 via the input/output bus 204. The ROM 208 stores therein a display control program for generating a driving signal to be input into the main display device 32, the upper sub-display device 34 or the lower sub-display device 38 according to the image display order. The RAM 210 temporarily stores a

flag and a variable value used in the display control program therein.

[0051] The VDP 212 is connected to the input/output bus 204. The VDP 212 includes a sprite circuit, a screen circuit, a pallet circuit and the like and executes various processes to display a desired image on the main display device 32, the upper sub-display device 34 or the lower sub-display device 38.

[0052] The video RAM 214, the video ROM 216, the first driving circuit 218, the second driving circuit 220 and the third driving circuit 222 are connected to the VDP 212. The video RAM 214 temporarily stores an image data corresponding to the image display order therein. The video ROM 216 stores a background image data (e.g. a background image to be displayed on the main display device 32), a symbol image data (e.g. an identification information image), a character image data (e.g. a character image to be displayed as an effect content) and the like therein. The symbol image data is employed when a symbol is variably displayed or stop-displayed on the main display device 32. The symbol image data includes various display modes (e.g. an enlarged image, a reduced image and a deformed image). The character image data includes various action modes in which one or more characters perform a sereies of actions.

[0053] The first driving circuit 218 generates a driving signal for driving the main display device 32. The second driving circuit 220 generates a driving signal for driving the upper sub-display device 34. The third driving circuit 222 generates a driving signal for driving the lower sub-display device 38.

[0054] The CPU 206 reads the display control program stored in the ROM 208 and then generates an image data to be displayed on the main display device 32, the upper sub-display device 34 or the lower sub-display device 38 according to the image display order which is output from the main conrol circuit 60. The generated image data is stored in the RAM 214. It is noted that the image display order includes a background display order, a symbol display order, a character display order and the like.

(Control process executed in gaming management system)

[0055] As shown in FIG.7A, in a control process executed in the gaming management system 500, the CPU 66 of the gaming machine 2 determines whether or not a player inserts the membership card into the card slot 402 of the card unit 400, via the reader/writer 404 of the card unit 400 (S201). If the player inserts the membership card, the CPU 66 sends to the insurance management server 1 the machine ID number and information regarding participation/non-participation in the gaming insurance which is read by the reader/writer 404 and then the control process proceeds to S401. If the player does not insert the membership card, the control process remains at S201.

[0056] The CPU 10 of the insurance management server 1 determines whether or not the player has purchased the gaming insurance on the basis of the sent information (S401). If the player has purchased the gaming insurance, the control process proceeds to S402. If the player has not purchased the gaming insurance, the CPU 10 sends to the gaming machine 2 a signal regarding non-participation in the gaming insurance on the basis of the machine ID number and then the control process proceeds to S202.

[0057] In S202, if the gaming machine 2 receives the signal from the insurance management server 1, the CPU 66 of the gaming machine 2 determines whether or not the membership card is ejected from the card slot 402. More specifically, the CPU 66 displays on the display monitor 403 the following sentence "YOU HAVE NOT PURCHASED GAMING INSURANCE. IF YOU FINISH PLAYING GAME, PLEASE PRESS ONE BUTTON OF CARD UNIT.". If the player presses one of the buttons 401 within a regular time, the CPU 66 causes the reader/writer 404 to eject the membership card from the card slot 402 and then finishes the control process. If the player does not press one of the buttons 401 within the regular time, the control process proceeds to S101. The CPU 66 executes a game for non-participation in the gaming insurance and then the control process proceeds to S401 (S101).

[0058] In S402, the CPU 10 of the insurance management server 1 sends to the gaming machine 2 a signal regarding a demand for sending a player ID number stored in the membership card on the basis of the machine ID number. If the gaming machine 2 receives the signal from the insurance management server 1, the CPU 66 of the gaming machine 2 sends to the insurance management server 1 the machine ID number and the player ID number which is read by the reader/writer 404 (S203). If the insurance management server 1 receives the player ID number from the gaming machine 2, the control process proceeds to S404 (S403).

[0059] In S404, the CPU 10 sends to the membership management server 300 a signal regarding a demend for sending membership information of the player which is related to the player ID number. As shown in FIG. 7B, if the membership management server 300 receives the signal from the insurance management server 1, the CPU 310 of the membership management server 300 sends to the insurance management server 1 the membership information of the player which is read from the HDD 318 of the membership management server 300 on the basis of the player ID number (S301). If the insurance management server 1 receives the membership information of the player from the membership management server 300, the control process proceeds to S406 (S405).

[0060] In S406, the CPU 10 reads from the HDD 18 of the insurance management server 1 a gaming insurance condition of the player on the basis of the player ID number, and then determines whether or not the player has paid an insurance fee on the basis of the gaming insurance condition. If the player has paid the insurance fee, the CPU 10 sends

to the gaming machine 2 a signal for allowing the gaming machine 2 to execute a game for participation in the gaming insurance, on the basis of the machine ID number. If the player has not paid the insurance fee, the control process remains at S406 and then waits until the insurance fee is paid by withdrawing the insurance fee from a player's account on the basis of the membership information automatically, or by the player directly.

[0061] In S102, if the gaming machine 2 receives the signal from the insurance management server 1, the CPU 66 of the gaming machine 2 executes the game for participation in the gaming insurance and then the control process proceeds to S204. In S204, the CPU 66 determines whether or not the membership card is ejected from the card slot 402. More specifically, the CPU 66 displays on the display monitor 403 the following sentence "IF YOU FINISH PLAYING GAME, PLEASE PRESS ONE BUTTON OF CARD UNIT.". If the player presses one of the buttons 401 within a regular time, the CPU 66 causes the reader/writer 404 to eject the membership card from the card slot 402 and then the control process proceeds to S103. If the player does not press one of the buttons 401 within the regular time, the control process returns to S102.

[0062] In S103, the CPU 66 sends to the insurance management server 1 the player ID number and gaming result information regarding a result of all games which the player played. If the insurance management server 1 receives the gaming result information from the gaming machine 2, the CPU 10 of the insurance management server 1 determines whether or not the gaming result information meets a gaming insurance condition of the player stored in the HDD 18 on the basis of the player ID (S407). If the gaming result information meets the gaming insurance condition, the insurance management server 1 pays out one or more gaming coins for insurance via the gaming machine 2 and then the CPU 10 rewrites the insurance payment list stored in the HDD 18 (S408). When the CPU 10 finishes rewiriting the insurance payment list, the control process finishes. If the gaming result information does not meet the gaming insurance condition, the control process finishes.

[0063] In the gaming management system 500, the insurance management server 1 determines whether or not one or more gaming coins for insurance are paid out after the player finished playing all games. However, the insurance management server 1 may determine whether or not one or more gaming coins for insurance are paid out every time one game is finished.

[0064] As shown in FIG. 8A, in a modified control process executed in the gaming management system 500, the CPU 66 of the gaming machine 2 determines whether or not a player inserts the membership card into the card slot 402 of the card unit 400, via the reader/writer 404 of the card unit 400 (S1201). If the player inserts the membership card, the CPU 66 sends to the insurance management server 1 the machine ID number and information regarding participation/non-participation in the gaming insurance which is read by the reader/writer 404 and then the control process proceeds to S1401. If the player does not insert the membership card, the control process remains at S1201.

[0065] The CPU 10 of the insurance management server 1 determines whether or not the player has purchased the gaming insurance on the basis of the sent information (S1401). If the player has purchased the gaming insurance, the control process proceeds to S1402. If the player has not purchased the gaming insurance, the CPU 10 sends to the gaming machine 2 a signal regarding non-participation in the gaming insurance on the basis of the machine ID number and then the control process proceeds to S1202.

[0066] In S1202, if the gaming machine 2 receives the signal from the insurance management server 1, the CPU 66 of the gaming machine 2 determines whether or not the membership card is ejected from the card slot 402. More specifically, the CPU 66 displays on the display monitor 403 the following sentence "YOU HAVE NOT PURCHASED GAMING INSURANCE. IF YOU FINISH PLAYING GAME, PLEASE PRESS ONE BUTTON OF CARD UNIT.". If the player presses one of the buttons 401 within a regular time, the CPU 66 causes the reader/writer 404 to eject the membership card from the card slot 402 and then finish the control process. If the player does not press one of the buttons 401 within the regular time, the control process proceeds to S1101. The CPU 66 executes a game for non-participation in the gaming insurance and then the control process proceeds to S1401 (S1101).

[0067] In S1402, the CPU 10 of the insurance management server 1 sends to the gaming machine 2 a signal regarding a demand for sending a player ID number stored in the membership card on the basis of the machine ID number. If the gaming machine 2 receives the signal from the insurance management server 1, the CPU 66 of the gaming machine 2 sends to the insurance management server 1 the machine ID number and the player ID number which is read by the reader/writer 404 (S1203). If the insurance management server 1 receives the player ID number from the gaming machine 2, the control process proceeds to S1404 (S1403).

[0068] In S1404, the CPU 10 sends to the membership management server 300 a signal regarding a demend for sending membership information of the player which is related to the player ID number. If the membership management server 300 receives the signal from the insurance management server 1, the CPU 310 of the membership management server 300 sends to the insurance management server 1 the membership information of the player which is read from the HDD 318 of the membership management server 300 on the basis of the player ID number (S1301). As shown in FIG.8B, if the insurance management server 1 receives the membership information of the player from the membership management server 300, the control process proceeds to S1406 (S1405).

[0069] In S1406, the CPU 10 reads from the HDD 18 of the insurance management server 1 a gaming insurance

condition of the player on the basis of the player ID number, and then determines whether or not the player has paid an insurance fee on the basis of the gaming insurance condition. If the player has paid the insurance fee, the CPU 10 sends to the gaming machine 2 a signal for allowing the gaming machine 2 to execute a game for participation in the gaming insurance on the basis of the machine ID number. If the player has not paid the insurance fee, the control process remains at S1406 and then waits until the insurance fee is paid by withdrawing the insurance fee from a player's account on the basis of the membership information automatically, or by the player directly.

[0070] In S1102, if the gaming machine 2 receives the signal from the insurance management server 1, the CPU 66 of the gaming machine 2 executes the game for participation in the gaming insurance and then the control process proceeds to S1103. In S1103, the CPU 66 sends to the insurance management server 1 the machine ID number, the player ID number and gaming result information regarding a result of one game which the player played. If the insurance management server 1 receives the gaming result information from the gaming machine 2, the CPU 10 of the insurance management server 1 determines whether or not the gaming result information meets a gaming insurance condition of the player stored in the HDD 18 on the basis of the player ID (S1407). If the gaming result information meets the gaming insurance condition, the control process proceeds to S1408. If the gaming result information does not meet the gaming insurance condition, the control process proceeds to S1204.

[0071] In S1408, the insurance management server 1 pays out one or more gaming coins for insurance via the gaming machine 2 and then the CPU 10 rewrites the insurance payment list stored in the HDD 18. If the CPU 10 finishes rewiriting the insurance payment list, the control process proceeds to S1409.

[0072] In S1409, the CPU 10 determines whether or not the gaming insurance expires on the basis of the gaming insurance condition and the insurance payment list. If the gaming insurance expires, the control process proceeds to S1410. If the gaming insurance does not expire, the control process returns to S1406.

[0073] In S1410, the CPU 10 determines whether or not the player repurchases the gaming insurance on the basis of the gaming insurance condition. More specifically, the CPU 10 determines whether or not there is information that the player concluded an automatic renewal special contract on the basis of the gaming insurance condition. If there is the information, the control process proceeds to S1411. If there is not the information, the CPU 10 sends to the gaming machine 2 a signal for allowing the gaming machine 2 to execute a game for non-participation in the gaming insurance and then the control process proceeds to S1104.

[0074] In S1411, the CPU 10 rewrites the gaming insurance condition (e.g. changing an insurance rate) to contiue the gaming insurance on the basis of the content of the automatic renewal special contract, and then the control process returns to S1406. It is noted that the insurance rate may be changed according to an insurance rate table in which a value of the insurance rate is set with respect to the number of repurchases at the time of rewriting the gaming insurance condition. The insurance rate table is stored in the HDD 18.

[0075] In S1204, the CPU 66 of the gaming machine 2 determines whether or not the membership card is ejected from the card slot 402. More specifically, the CPU 66 displays on the display monitor 403 the following sentence "IF YOU FINISH PLAYING GAME, PLEASE PRESS ONE BUTTON OF CARD UNIT. ". If the player presses one of the buttons 401 within a regular time, the CPU 66 causes the reader/writer 404 to eject the membership card from the card slot 402 and then the control procee finishes. If the player does not press one of the buttons 401 within the regular time, the control process returns to S1102.

[0076] In S1104, if the gaming machine 2 receives the signal from the insurance management server 1, the CPU 66 of the gaming machine 2 executes the game for non-participation in the gaming insurance and then the control process returns to S1401.

[0077] Therefore, when the gaming management system 500 executes the control process shown in FIGS.8A and 8B, the CPU 66 of the gaming machine 2 and the CPU 10 of the insurance management server 1 serve as the following means. When the control process proceeds to S1103, the CPU 66 serves as a generating means. When the control process proceeds to S1101, S1102 or S1104, the CPU 66 serves as an executing means. When the control process proceeds to S1407, the CPU 10 serves as a payout determing means. When the control process proceeds to S1410, the CPU 10 serves as a continuation determining means. When the control process proceeds to S1411, the CPU 10 serves as a changing means.

(Advantageous characteristics of gaming identification system)

[0078] In S1407, the CPU 10 of the insurance management server 1 determines whether or not one or more gaming coins for insurance are paid out, according to the gaming result information sent from the gaming machine 2 and the gaming insurance condition stored in the HDD 18 of the insurance management server 1. Therefore, the insurance function of the gaming management system 500 can provide various services according to player's request by using the gaming insurance condition of the player stored in the HDD 18.

[0079] In S1410, the CPU 10 of the insurance management server 1 determines whether or not the insurance management server 1 continues the gaming insurance (the player repurchases the gaming insurance) according to the

gaming insurance condition of the player stored in the HDD 18. Therefore, the insurance function of the gaming management system 500 can provide one service to execute a continuation process of the gaming insurance without interrupting the game. As a result, convenience of repurchasing the gaming insurance is improved, which prevents the player from forgetting to repurchase the gaming insurance when the gaming insurance expires.

[0080] The gaming machine 2 is not provided with any insurance coin passageway. Therefore, the gaming management system 500 can includes the gaming machine 2 configured to decrease in the volume of the gaming machine 2 in comparison with that of the conventional gaming machine.

[0081] The present invention is not limited to the above exemplary embodiment, and various modifications can be employed within the scope of the technical idea according to the present invention besides the above exemplary embodiment.

[0082] Instead of the gaming machine 2 in which a player plays a game that is displayed on the main display device 32, a slot machine provided with mechanical reels, a pachinko gaming machine or the like may be employed in the gaming management system 500.

[0083] The gaming coin may be replaced by a gaming ball when a player plays in the pachinko gaming machine. Also, the gaming coin may be replaced by another gaming medium such as a gaming medal, a gaming token, a gaming tichet, a gaming point or a gaming card. In a case where a player plays in another gaming machine in which the gaming card (e.g. a magnetic card or an IC card) is used, one or more digital values corresponding to the insurance payment are added to digital values stored in the gaming card. Further, instead of paying out insurance from the gaming machine 2, the insurance may be paid to the player's account.

[0084] In a case where the player purchases the gaming insurance, the player inserts the membership card into the card unit 400 and causes the card unit 400 to read the player ID number stored in the own membership card. Next, the main display device 32, the upper sub-display device 34 or the lower sub-display device 38 displays an insurance purchase screen thereon. If the player carries out an insurance purchase operation, the membership management server 300 sends the membership information corresponding to the player ID to the insurance management server 1. Thereby, the insurance management sever 1 withdraws the insurance fee from the palyer's account accordint to the corresponding memebeship information and causes the HDD 18 to store the insurance condition of the player therein. Also, instead of the automatic payment, the player may directly pay the insurance fee and concludes the agreement of the gaming insurance on a document. When the player operates the input device 26, the insurance management server 1 causes the HDD 18 to store the gaming insurance condition of the player therein.

[0085] In a case where the CPU 10 of the insurance management server 1 uses the membership information received from the membership management server 300 and the gaming insurance condition stored in the HDD 18, the CPU 10 may read a player's name from the membership information on the basis of the palyer ID number and then read the gaming insurance condition of the player on the basis of the player's name, instead of the player ID number. Thereby, the player needs not to purchase the gaming insurance after joining the membership. More specifically, the gaming insurance purchase procedure can be independent from the membership join procedure. This improves convenience of purchasing the gaming insurance.

Claims

1. A gaming management system (500) comprising:

a network (N);
a gaming machine (2) configured to execute a game;
an insurance management server (1) configured to manage insurance information with respect to gaming insurance and connected to the gaming machine (2) via the network (N); and
a membership management server (300) configured to manage membership information and connected to the insurance management server (1) via the network (N),

wherein
the gaming machine (2) comprises:

a card unit (400) configured to read a player ID number from a membership card and send the read player ID number to the insurance management server (1);
an executing means (66) for executing the game when the membership card is inserted into the card unit (400); and
a generating means (66) for generating gaming result information with respect to the game executed by the executing means (66) and send the generated gaming result information to the insurance management server (1);

the membership management server (300) comprises:

a membership information storage (318) configured to store membership information corresponding to the player ID number read by the card unit (400); and
a sending means (322) for sending the corresponding membership information to the insurance management server (1); and

the insurance management server (1) comprises:

an insurance information storage (18) configured to store insurance information corresponding to the player ID number read by the card unit (400);
a payout determing means (10) for determining whether or not the insurance management server (1) pays out insurance according to the read player ID number, the generated gaming result information and the corresponding insurance information; and
a continuation determing means (10) for determining whether or not the insurance management server (1) continues the gamimg insurance according to the corresponding insurance information when the gaming insurance expires.

2. A gaming management system (500) comprising:

a network (N);
a gaming machine (2) configured to execute a game;
an insurance management server (1) configured to manage insurance information with respect to gaming insurance and connected to the gaming machine (2) via the network (N); and
a membership management server (300) configured to manage membership information and connected to the insurance management server (1) via the network (N),

wherein
the gaming machine (2) comprises:

a card unit (400) configured to read a player ID number from a membership card and send the read player ID number to the insurance management server (1);
an executing means (66) for executing the game when the membership card is inserted into the card unit (400); and
a generating means (66) for generating gaming result information with respect to the game executed by the executing means (66) and send the generated gaming result information to the insurance management server (1);

the membership management server (300) comprises:

a membership information storage (318) configured to store membership information corresponding to the player ID number read by the card unit (400); and
a sending means (322) for sending the corresponding membership information to the insurance management server (1) ; and

the insurance management server (1) comprises:

an insurance information storage (18) configured to store insurance information corresponding to the player;
an identifying means (10) for reading identification information corresponding to the player from the corresponding membership information according to the read player ID number;
a payout determing means (10) for determining whether or not the insurance management server (1) pays out insurance according to the read identification information, the generated gaming result information and the corresponding insurance information; and
a continuation determing means (10) for determining whether or not the insurance management server (1) continues the gamimg insurance according to the corresponding insurance information when the gaming insurance expires.

3. The gaming management system (500) according to claim 1 or 2, wherein the insurance management server (1) further comprises a changing means (10) for changing the insurance information according to insurance continuation

information stored in the insurance information storage (18) at the time of continuing the gaming insurance.

4. The gaming management system (500) according to claim 1 or 2, wherein the insurance management server (1) further comprises a withdrawing means (10) for withdrawing an insurance fee from a player's account according to the read player ID number and the corresponding membership information.

5. The gaming management system (500) according to claim 1 or 2, wherein the generating means (66) generates the gaming result information and sends the generated gaming result information to the insurance management server (1) when each game is finished.

FIG. 1

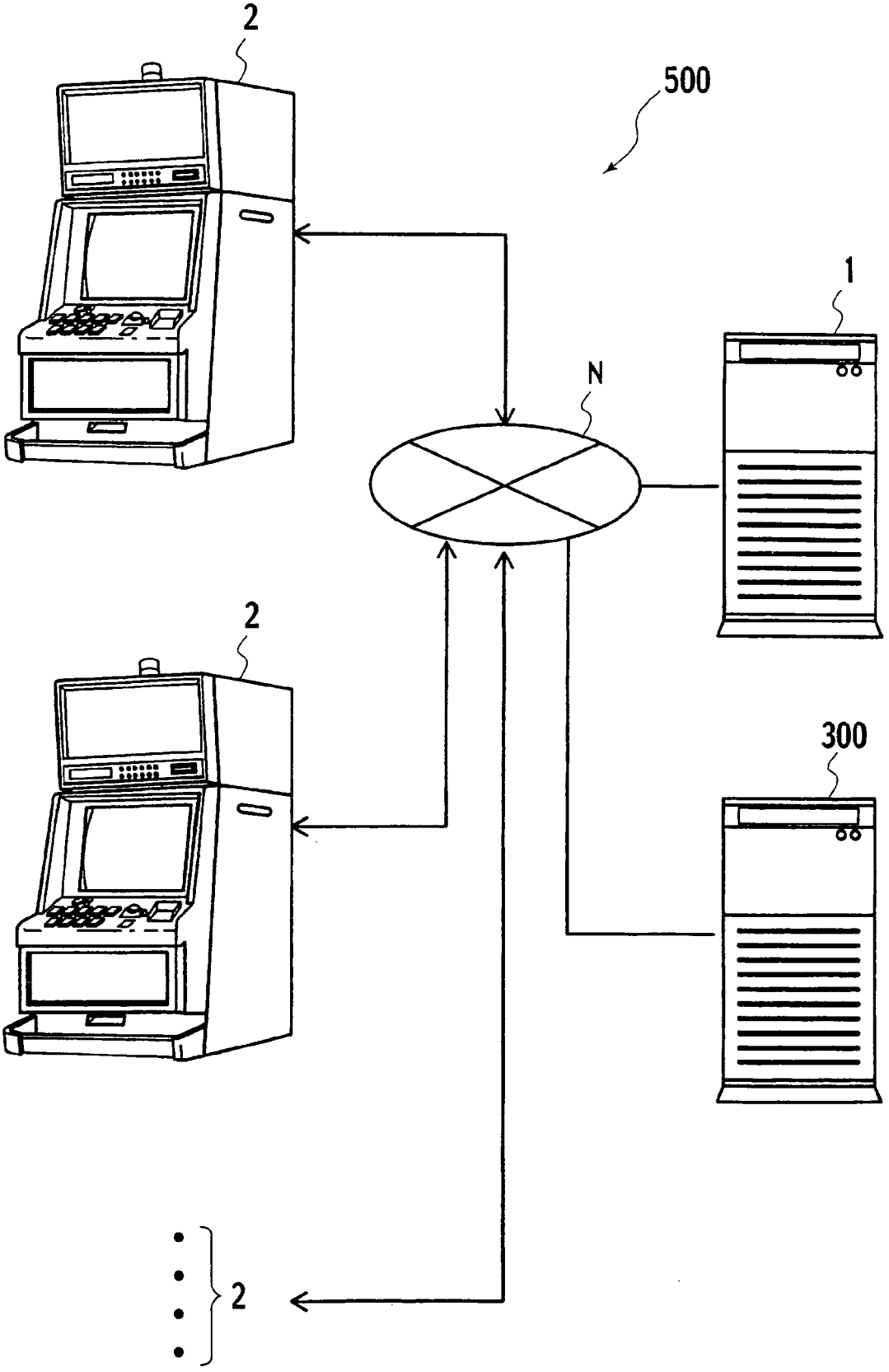


FIG. 2

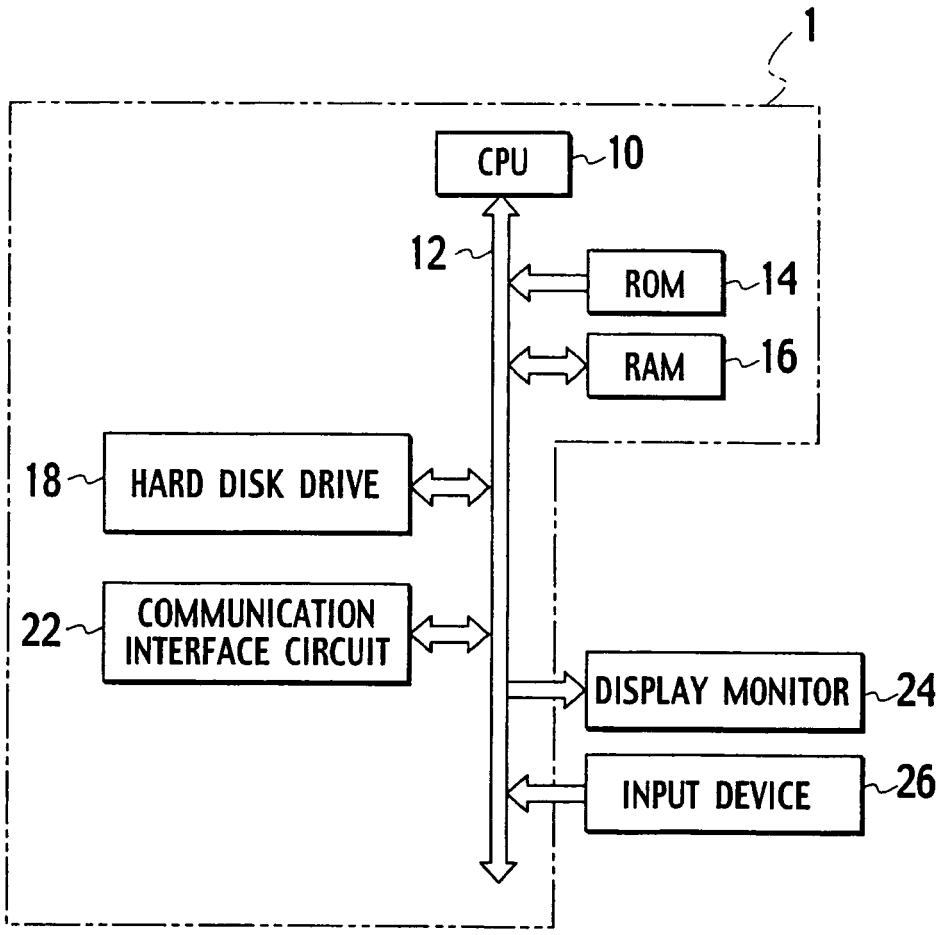

1
CPU
10
12
ROM
14
RAM
16
18
HARD DISK DRIVE
22
COMMUNICATION INTERFACE CIRCUIT
DISPLAY MONITOR
24
INPUT DEVICE
26

FIG. 3

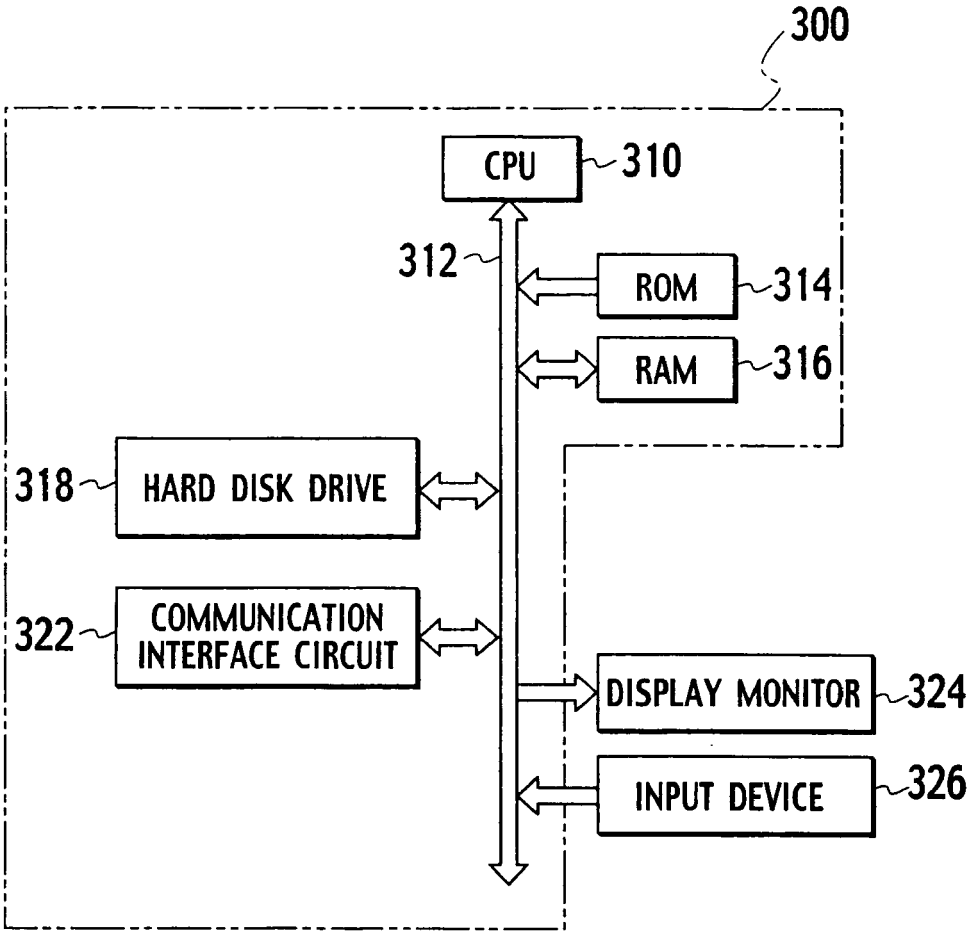

300
CPU
310
312
ROM
314
RAM
316
318
HARD DISK DRIVE
322
COMMUNICATION INTERFACE CIRCUIT
DISPLAY MONITOR
324
INPUT DEVICE
326

FIG. 4

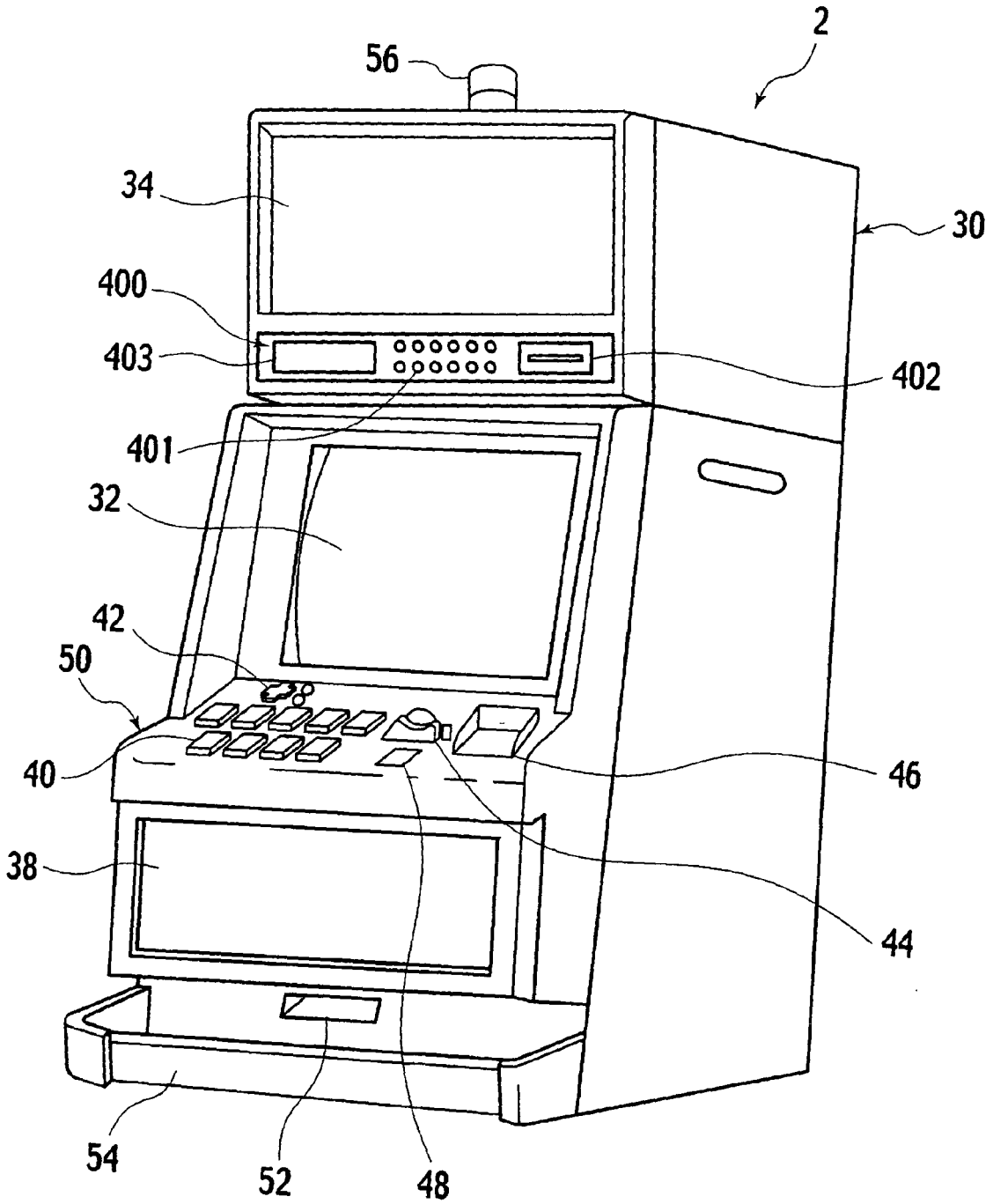


FIG. 5

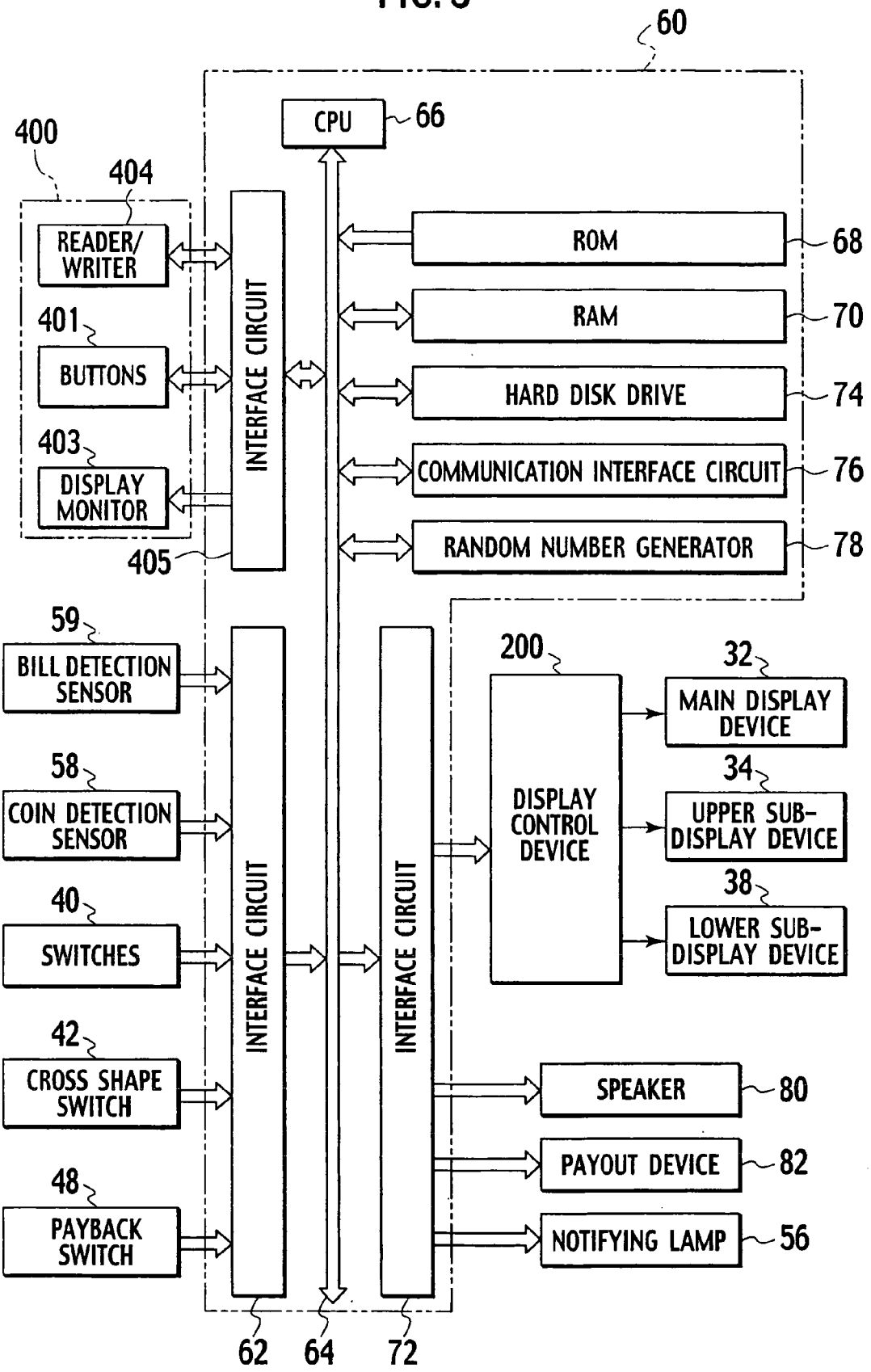

60
CPU
66
400
404
READER/ WRITER
401
BUTTONS
403
DISPLAY MONITOR
405
INTERFACE CIRCUIT
ROM
68
RAM
70
HARD DISK DRIVE
74
COMMUNICATION INTERFACE CIRCUIT
76
RANDOM NUMBER GENERATOR
78
59
BILL DETECTION SENSOR
58
COIN DETECTION SENSOR
40
SWITCHES
42
CROSS SHAPE SWITCH
48
PAYBACK SWITCH
INTERFACE CIRCUIT
INTERFACE CIRCUIT
200
DISPLAY CONTROL DEVICE
32
MAIN DISPLAY DEVICE
34
UPPER SUB-DISPLAY DEVICE
38
LOWER SUB-DISPLAY DEVICE
SPEAKER
80
PAYOUT DEVICE
82
NOTIFYING LAMP
56
62
64
72

FIG. 6

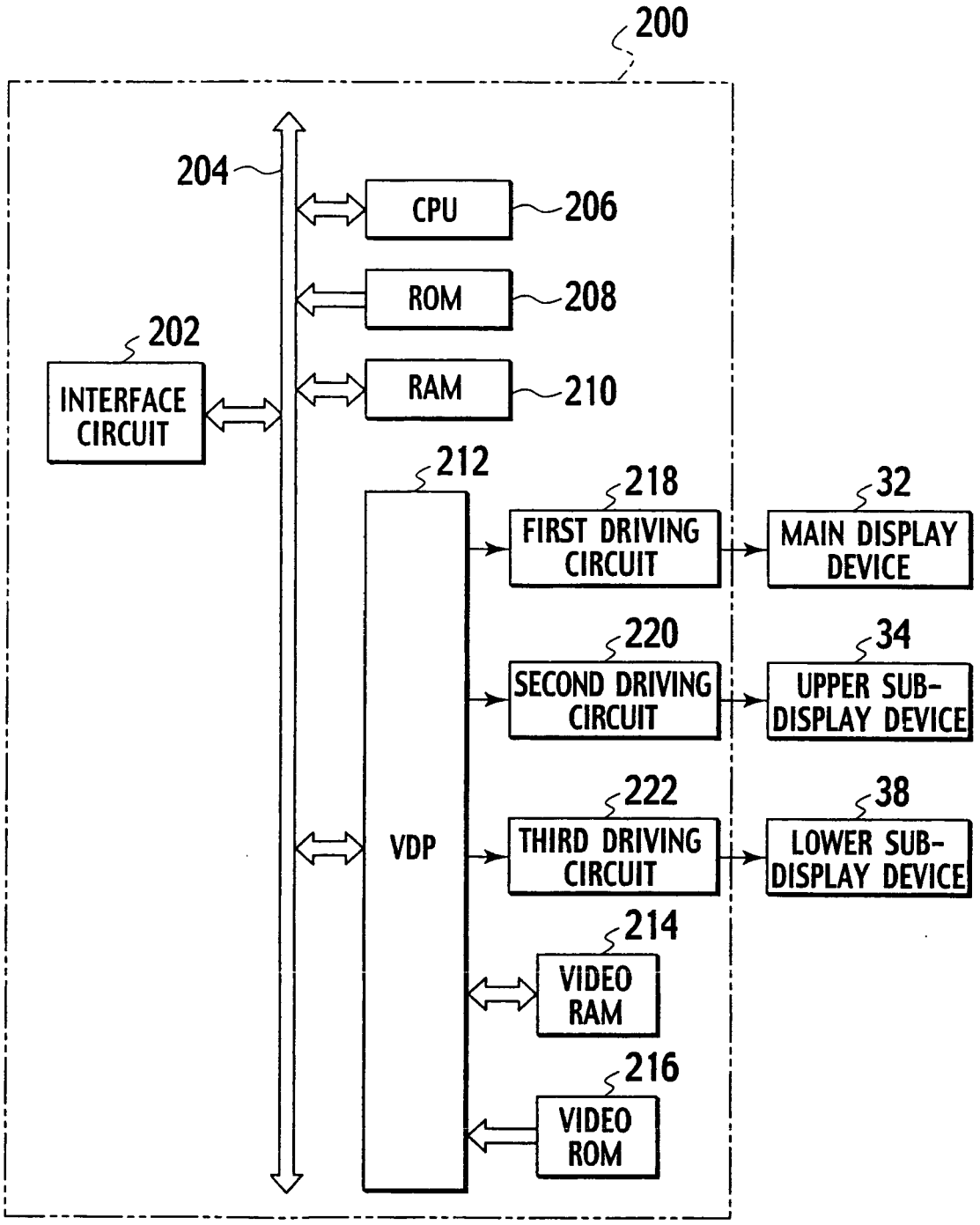
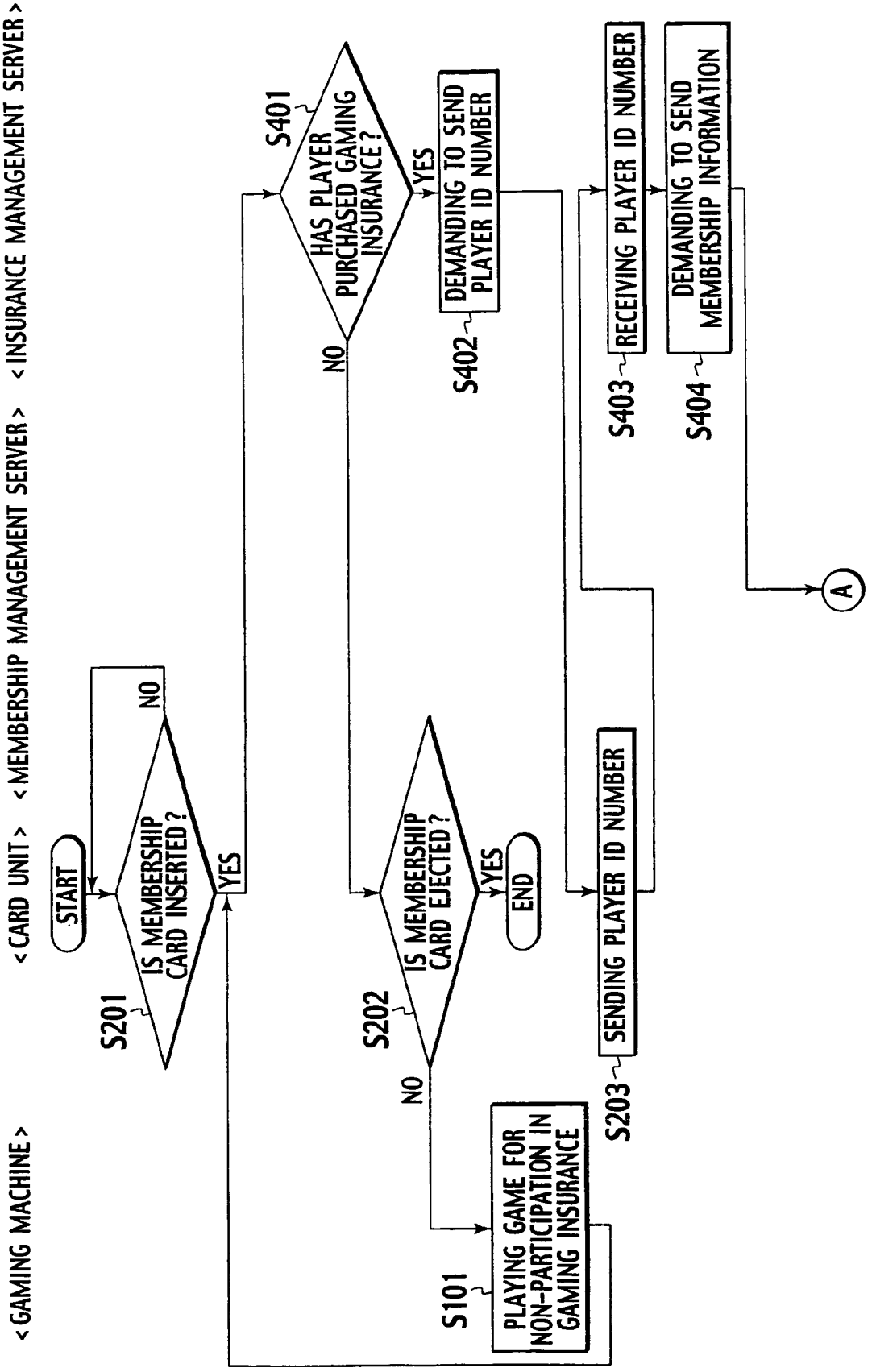

200
204
CPU
206
ROM
208
202
INTERFACE CIRCUIT
RAM
210
212
218
FIRST DRIVING CIRCUIT
32
MAIN DISPLAY DEVICE
220
SECOND DRIVING CIRCUIT
34
UPPER SUB-DISPLAY DEVICE
222
THIRD DRIVING CIRCUIT
38
LOWER SUB-DISPLAY DEVICE
VDP
214
VIDEO RAM
216
VIDEO ROM

FIG. 7A


<GAMING MACHINE>
<CARD UNIT>
<MEMBERSHIP MANAGEMENT SERVER>
<INSURANCE MANAGEMENT SERVER>
START
S201
IS MEMBERSHIP CARD INSERTED?
NO
YES
S401
HAS PLAYER PURCHASED GAMING INSURANCE?
YES
NO
S402
DEMANDING TO SEND PLAYER ID NUMBER
S403
RECEIVING PLAYER ID NUMBER
S404
DEMANDING TO SEND MEMBERSHIP INFORMATION
A
S202
IS MEMBERSHIP CARD EJECTED?
YES
END
NO
S203
SENDING PLAYER ID NUMBER
S101
PLAYING GAME FOR NON-PARTICIPATION IN GAMING INSURANCE

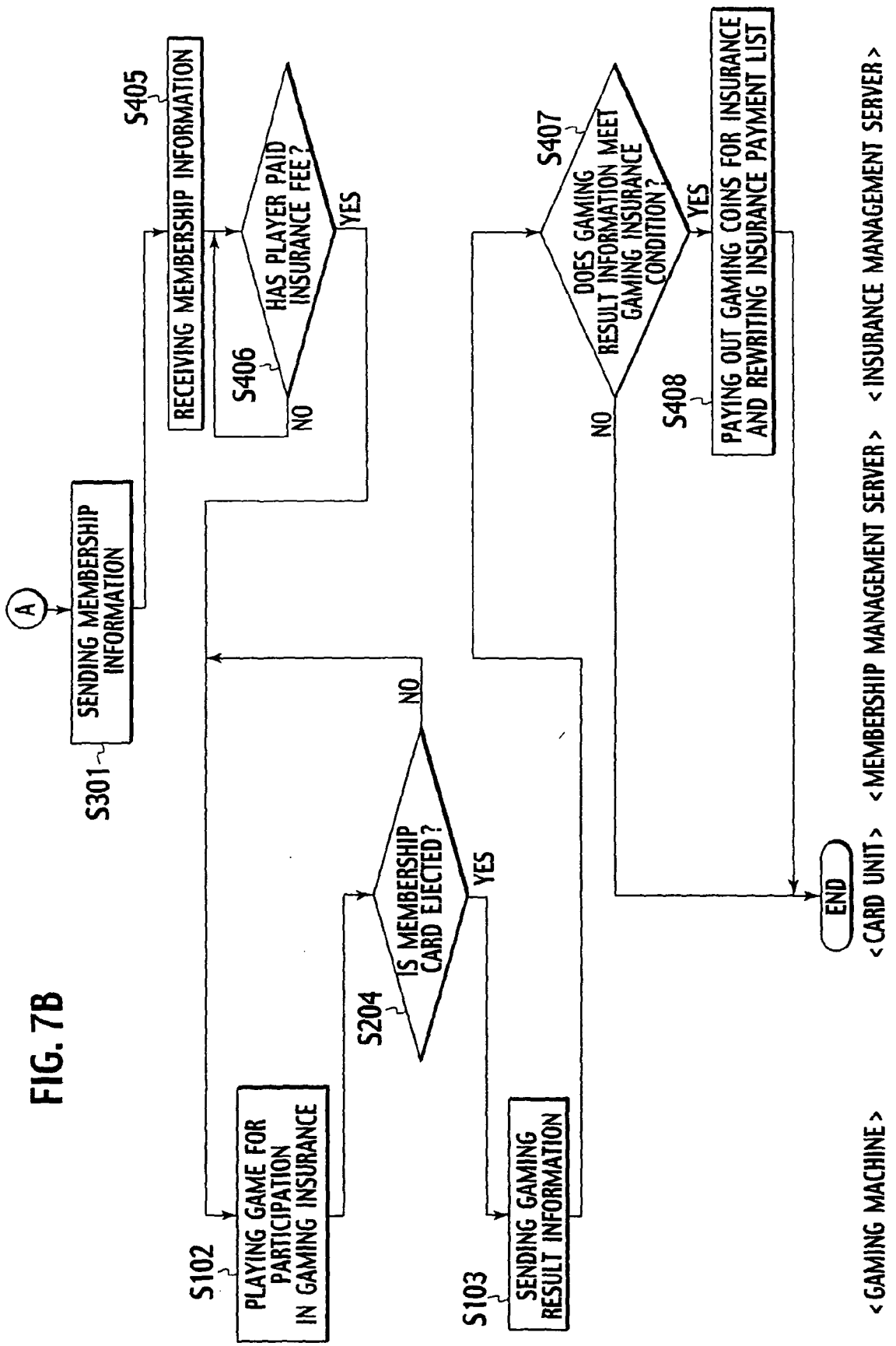
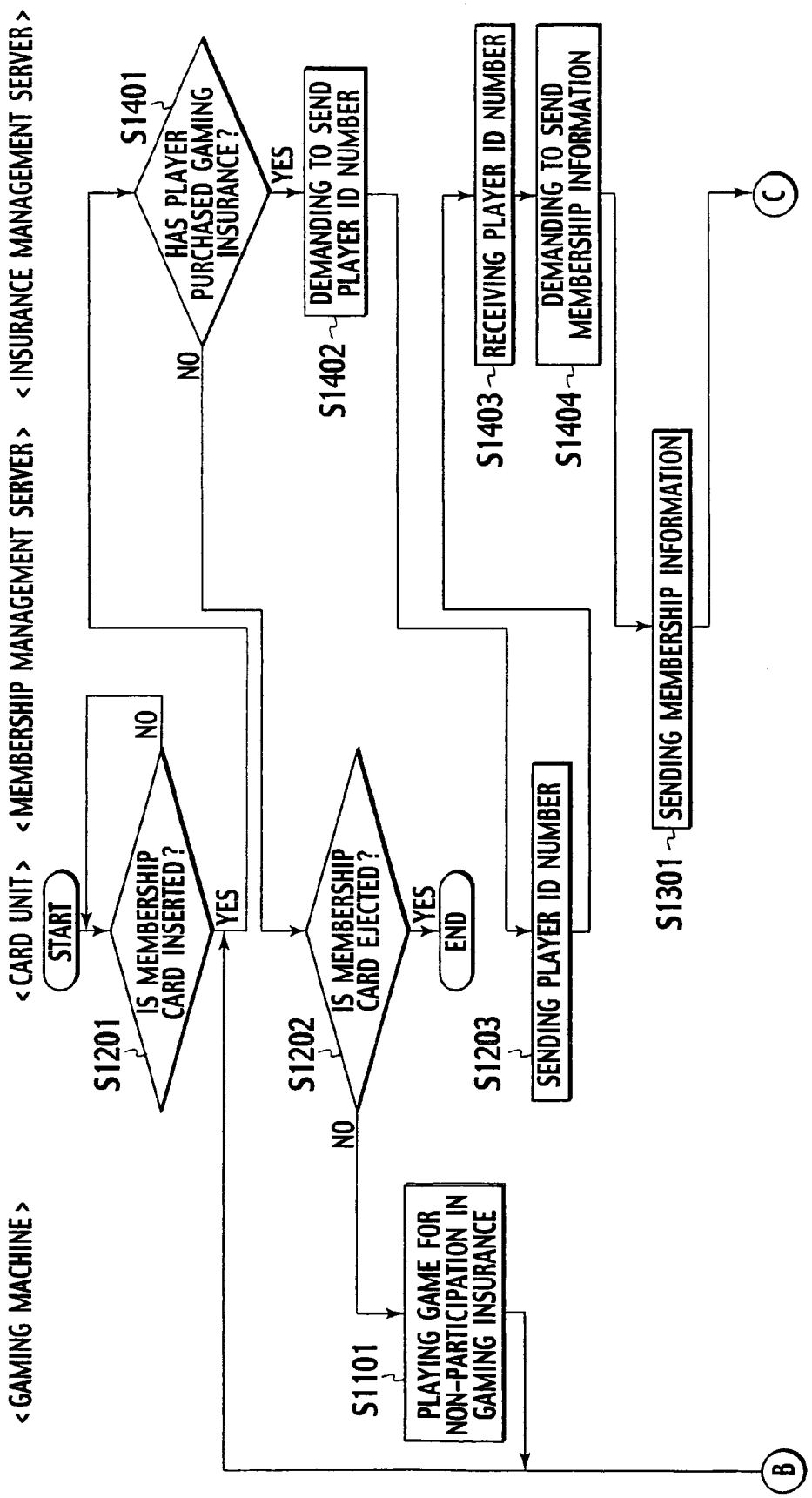

A
SENDING MEMBERSHIP INFORMATION
S301
RECEIVING MEMBERSHIP INFORMATION
S405
HAS PLAYER PAID INSURANCE FEE?
S406
NO
YES
PLAYING GAME FOR PARTICIPATION IN GAMING INSURANCE
S102
IS MEMBERSHIP CARD EJECTED?
S204
NO
YES
SENDING GAMING RESULT INFORMATION
S103
DOES GAMING RESULT INFORMATION MEET GAMING INSURANCE CONDITION?
S407
NO
YES
PAYING OUT GAMING COINS FOR INSURANCE AND REWRITING INSURANCE PAYMENT LIST
S408
END
<GAMING MACHINE>
<CARD UNIT>
<MEMBERSHIP MANAGEMENT SERVER>
<INSURANCE MANAGEMENT SERVER>

FIG. 7B

FIG. 8A


<GAMING MACHINE>
<CARD UNIT>
<MEMBERSHIP MANAGEMENT SERVER>
<INSURANCE MANAGEMENT SERVER>
START
S1201
IS MEMBERSHIP CARD INSERTED?
NO
YES
S1401
HAS PLAYER PURCHASED GAMING INSURANCE?
NO
YES
S1402
DEMANDING TO SEND PLAYER ID NUMBER
S1403
RECEIVING PLAYER ID NUMBER
S1404
DEMANDING TO SEND MEMBERSHIP INFORMATION
S1301
SENDING MEMBERSHIP INFORMATION
C
S1202
IS MEMBERSHIP CARD EJECTED?
NO
YES
END
S1203
SENDING PLAYER ID NUMBER
S1101
PLAYING GAME FOR NON-PARTICIPATION IN GAMING INSURANCE
B

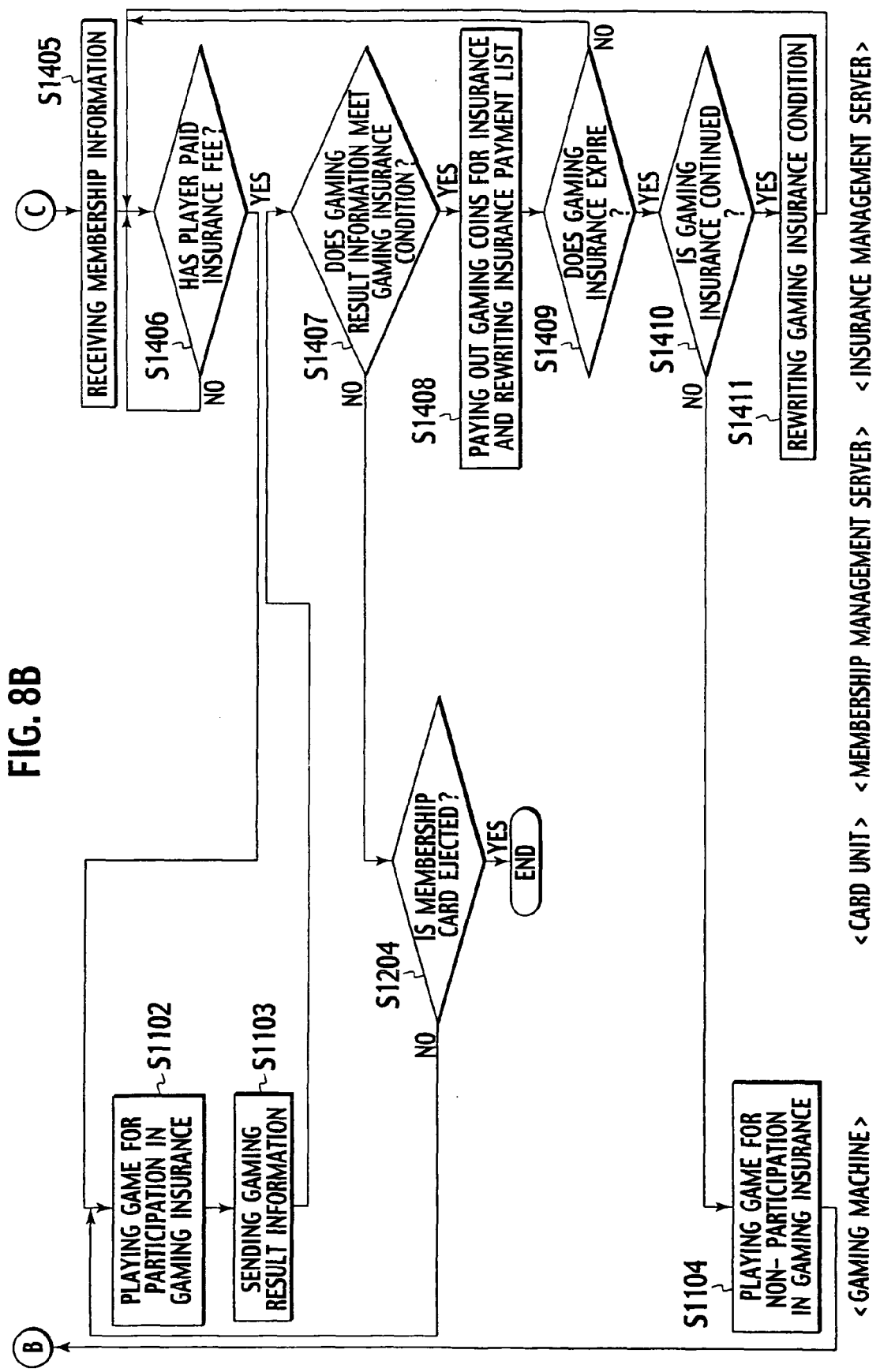

B
C
S1405
RECEIVING MEMBERSHIP INFORMATION
S1406
HAS PLAYER PAID INSURANCE FEE?
NO
YES
S1407
DOES GAMING RESULT INFORMATION MEET GAMING INSURANCE CONDITION?
NO
YES
S1408
PAYING OUT GAMING COINS FOR INSURANCE AND REWRITING INSURANCE PAYMENT LIST
S1409
DOES GAMING INSURANCE EXPIRE?
NO
YES
S1410
IS GAMING INSURANCE CONTINUED?
NO
YES
S1411
REWRITING GAMING INSURANCE CONDITION
S1204
IS MEMBERSHIP CARD EJECTED?
NO
YES
END
S1102
PLAYING GAME FOR PARTICIPATION IN GAMING INSURANCE
S1103
SENDING GAMING RESULT INFORMATION
S1104
PLAYING GAME FOR NON-PARTICIPATION IN GAMING INSURANCE
<GAMING MACHINE>
<CARD UNIT>
<MEMBERSHIP MANAGEMENT SERVER>
<INSURANCE MANAGEMENT SERVER>

FIG. 8B

European Patent Office

EUROPEAN SEARCH REPORT

Application Number
EP 06 00 4260

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 2003/220138 A1 (WALKER JAY S ET AL) 27 November 2003 (2003-11-27) * paragraphs [0015] - [0024], [0092] - [0101], [0191] * * abstract * -----	1-5	INV. G07F17/32
X	US 2003/119585 A1 (WALKER JAY S ET AL) 26 June 2003 (2003-06-26) * paragraph [0023] * -----	1-5	

TECHNICAL FIELDS SEARCHED (IPC)

G07F

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	31 May 2006	Verhoef, P

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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A : technological background
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P : intermediate document

T : theory or principle underlying the invention
E : earlier patent document, but published on, or after the filing date
D : document cited in the application
L : document cited for other reasons

& : member of the same patent family, corresponding document

EPO FORM 1503 03.82 (P04C01)

2

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 06 00 4260

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

31-05-2006

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2003220138 A1	27-11-2003	NONE	
US 2003119585 A1	26-06-2003	NONE	

EPO FORM P0459

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

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Patent documents cited in the description

- JP H04244178 A **[0002]**