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(54) **GAME SYSTEM AND SERVER DEVICE THAT CAN BE USED THEREIN**

Publication Classification

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(57) **ABSTRACT**

In a game system in which a game based on a plurality of types of game programs can be played on a plurality of game terminals, the pleasure of choosing a game machine that is provided by a typical conventional game system is similarly provided to a player using the present game system. A plurality of different identifiers are assigned to the same game program, and a virtual machine image corresponding to each of the identifiers is displayed on a display unit of a game terminal. A player decides what type of game he/she wishes to play by performing a game selection operation. Thereafter, the player performs a virtual machine selection operation to select the virtual machine image that corresponds to a virtual machine number that he/she wishes to choose so that he/she can play the game.

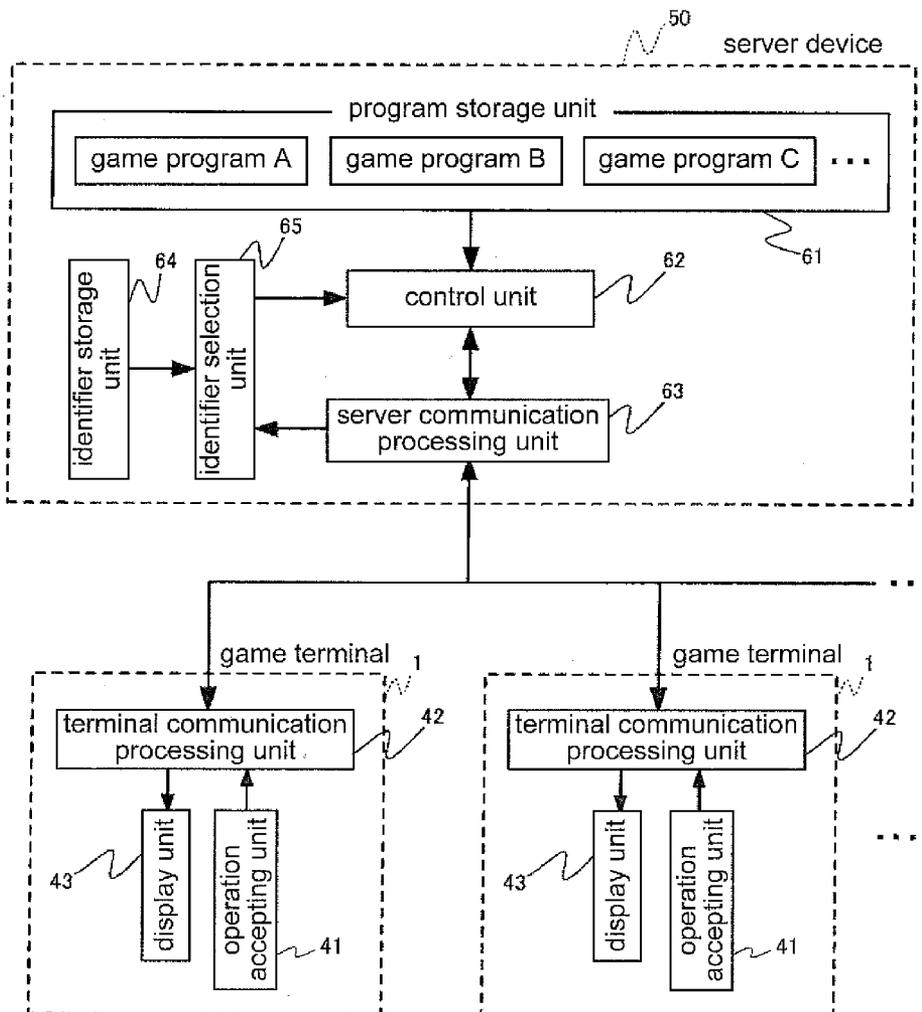
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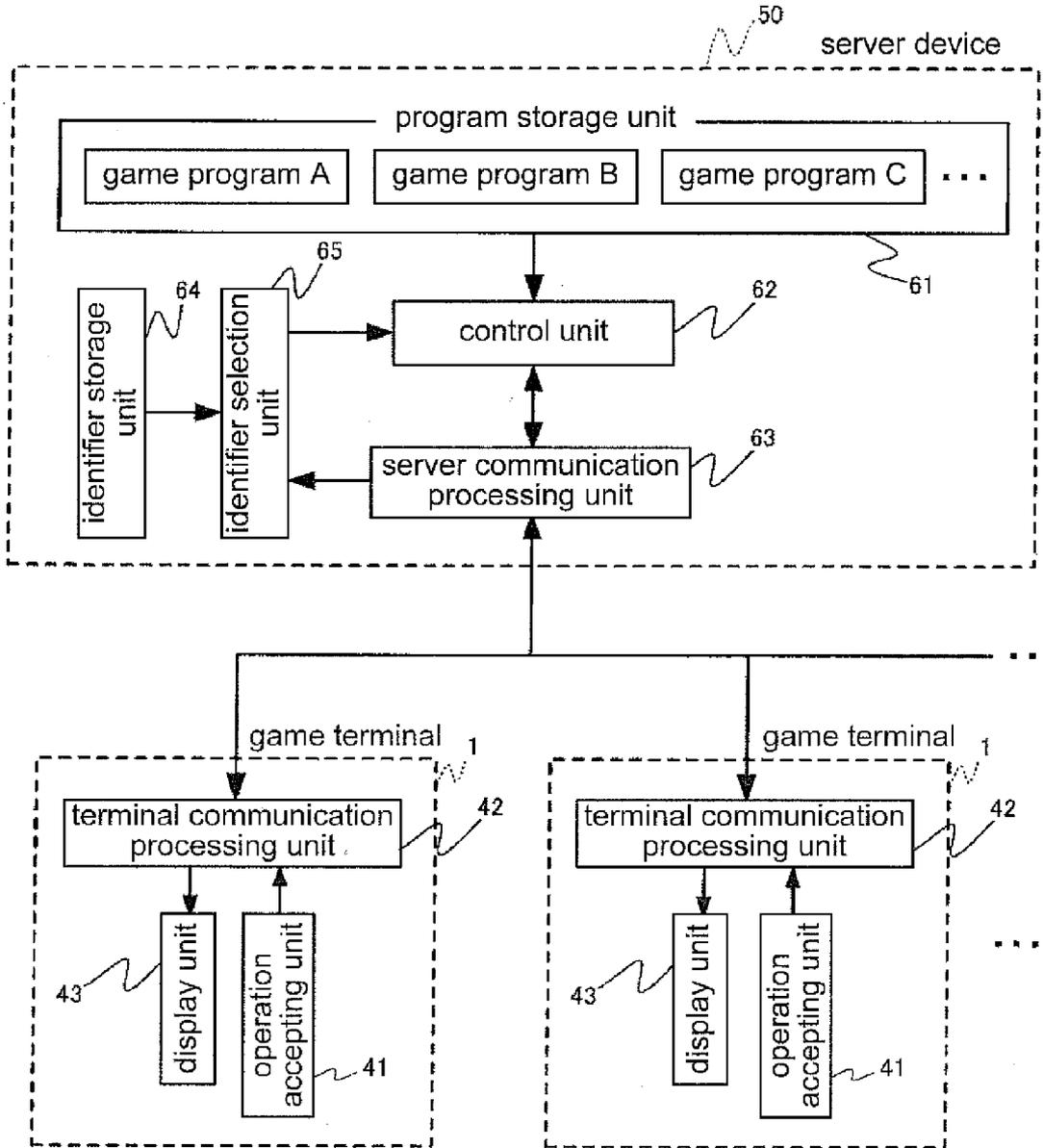


Fig. 1

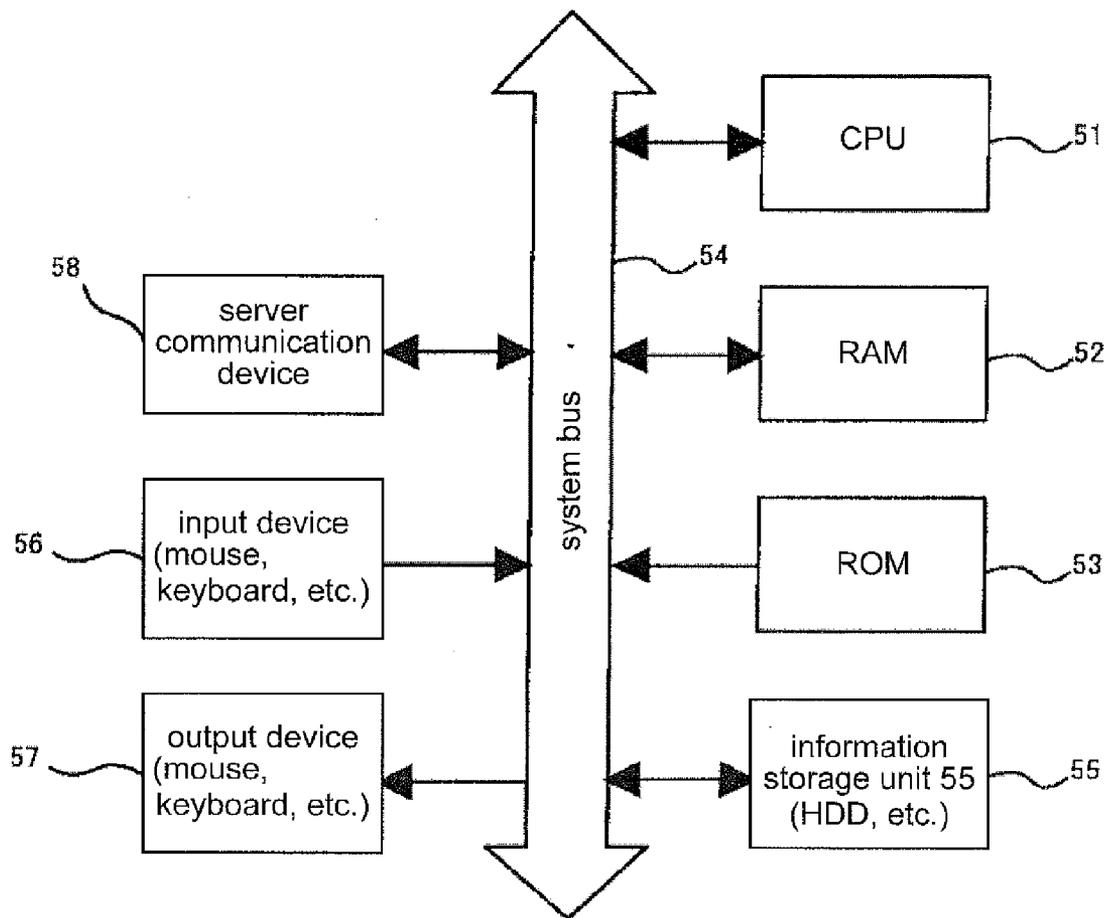


Fig. 2

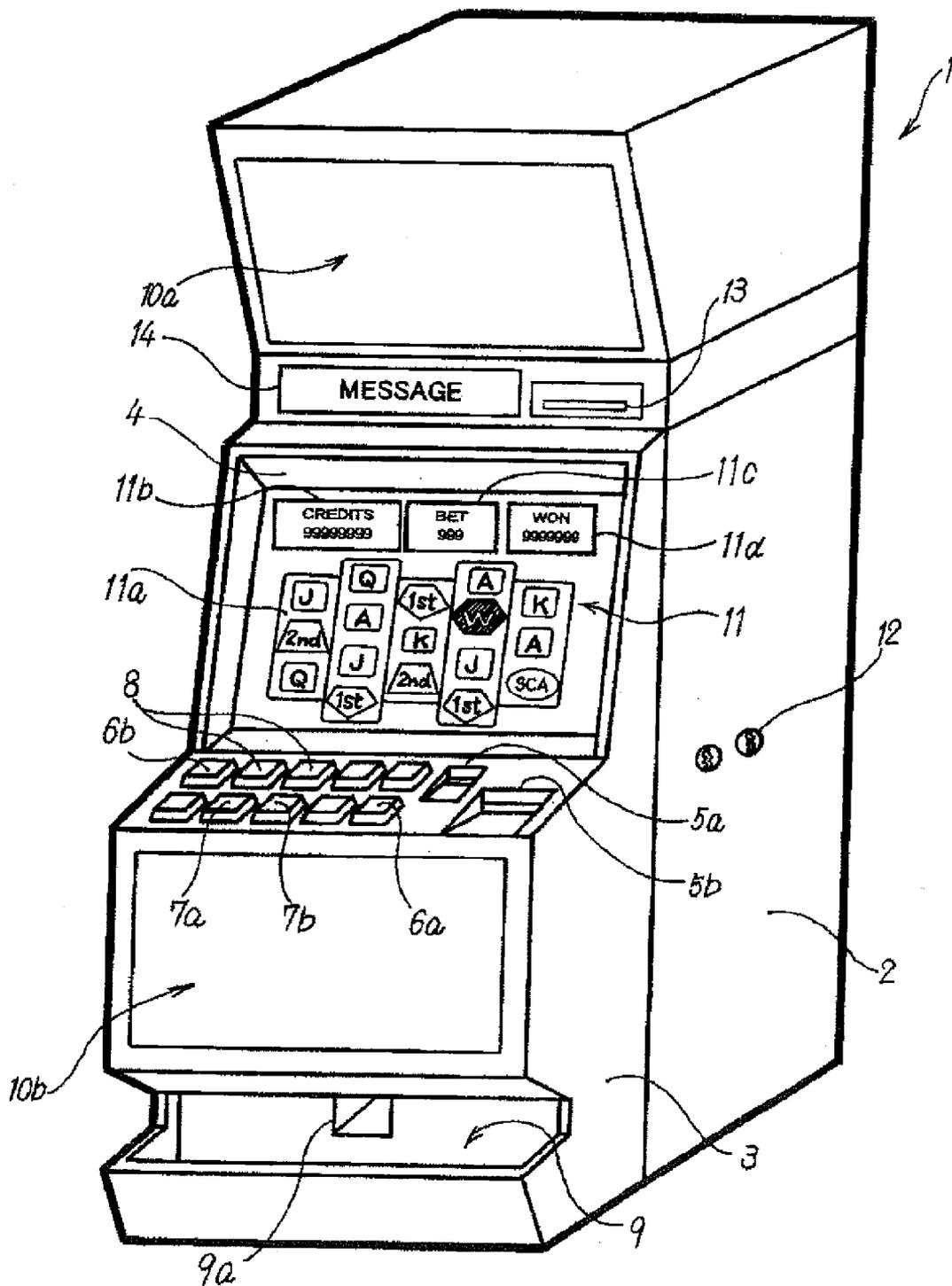


Fig. 3

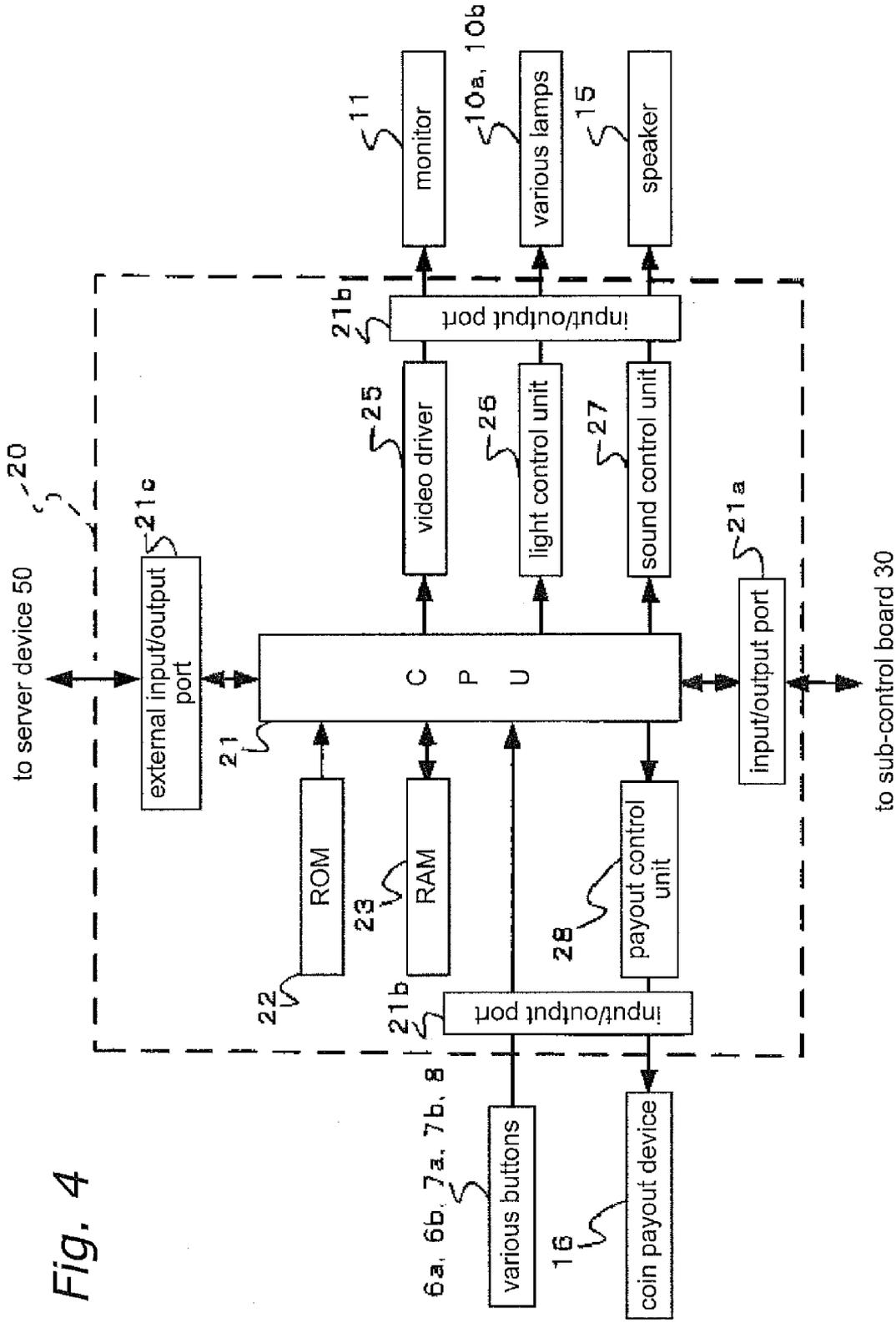


Fig. 4

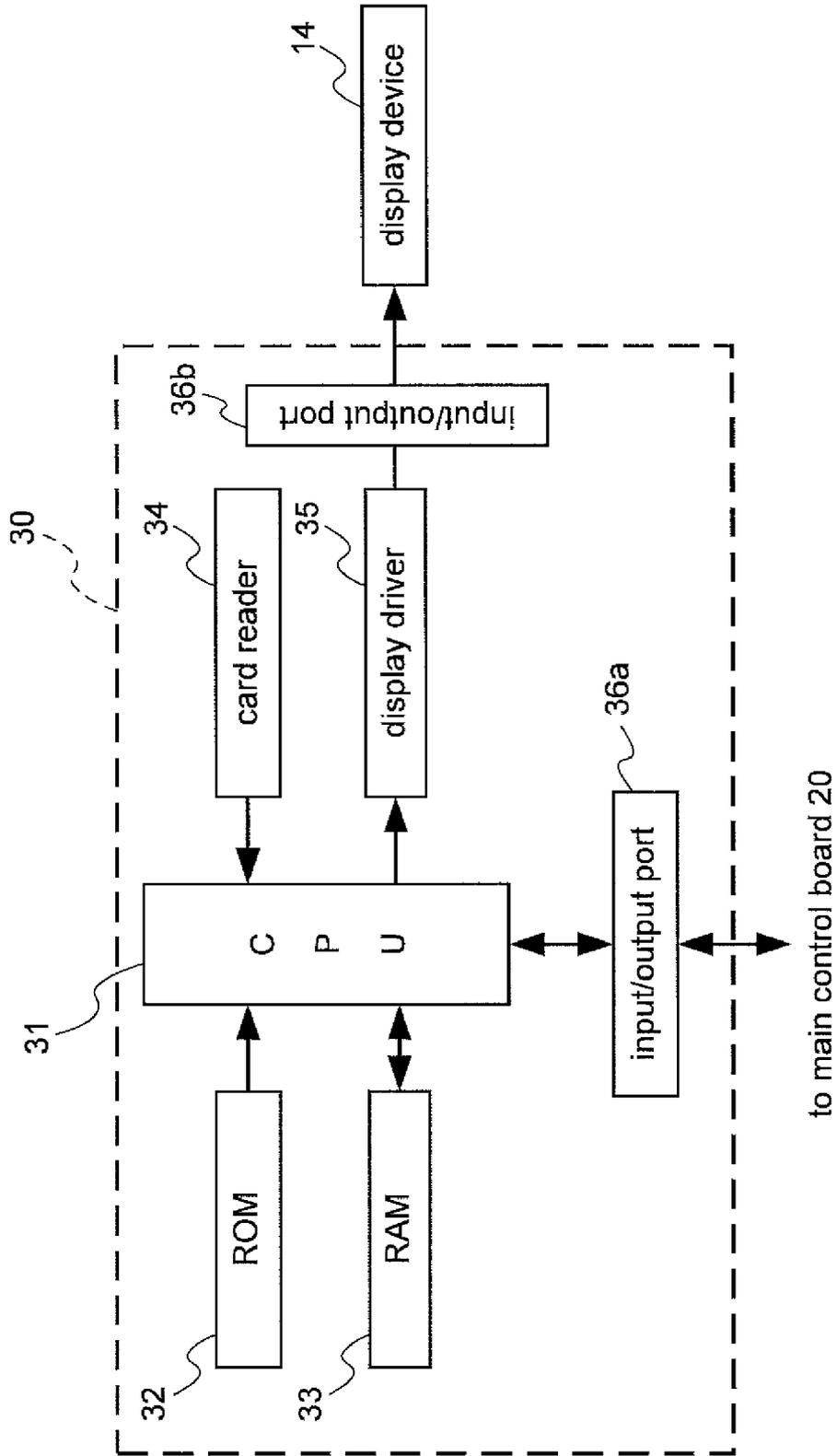


Fig. 5

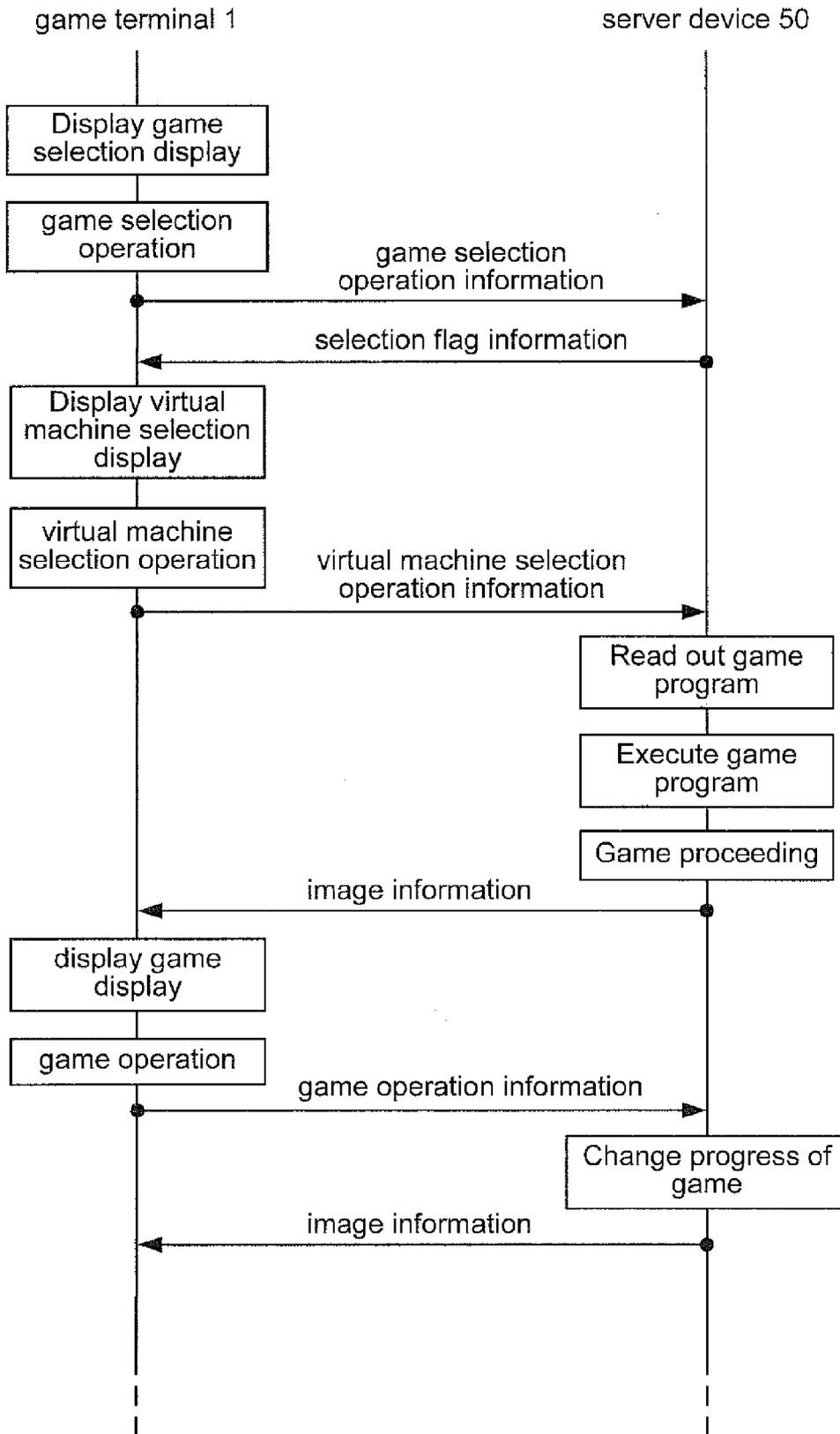


Fig. 6

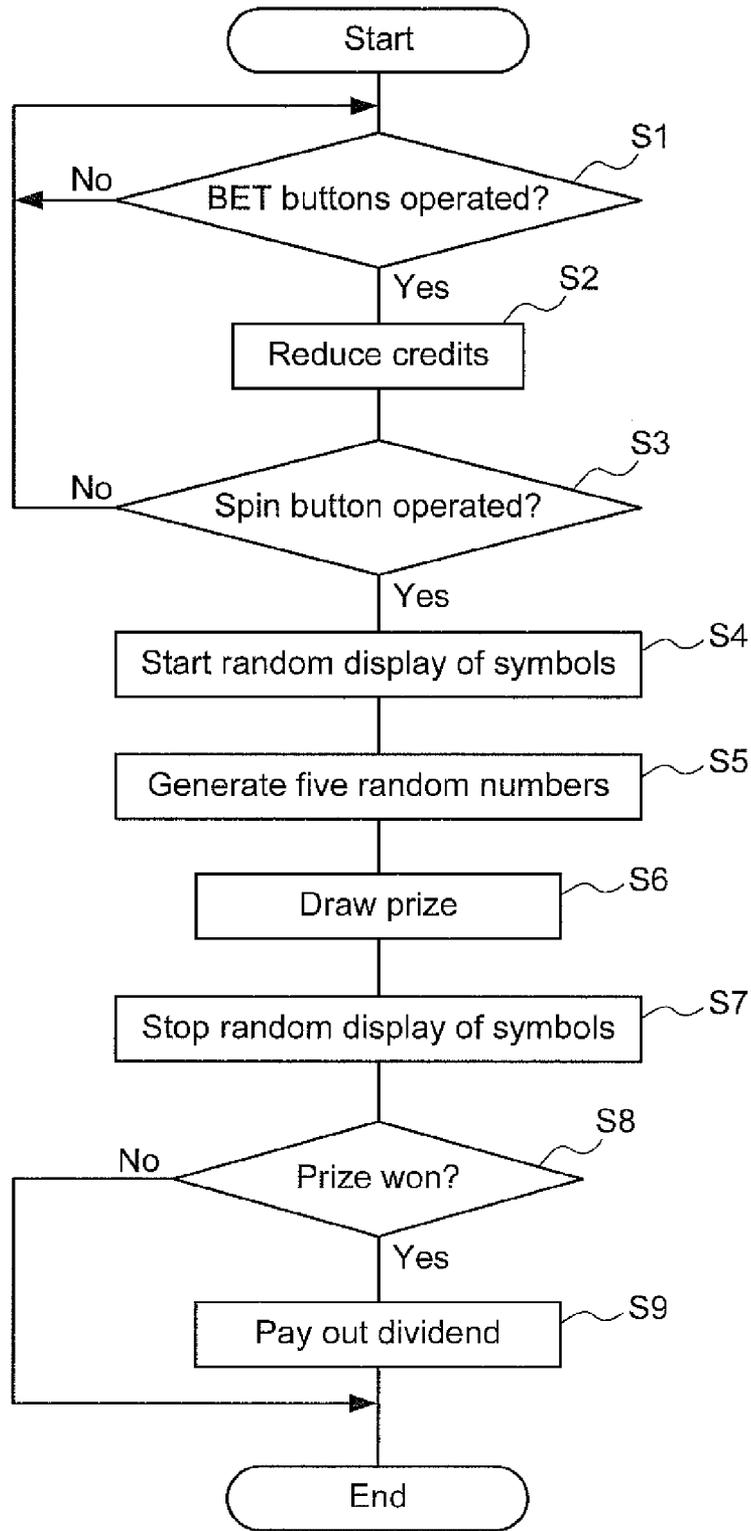


Fig. 7

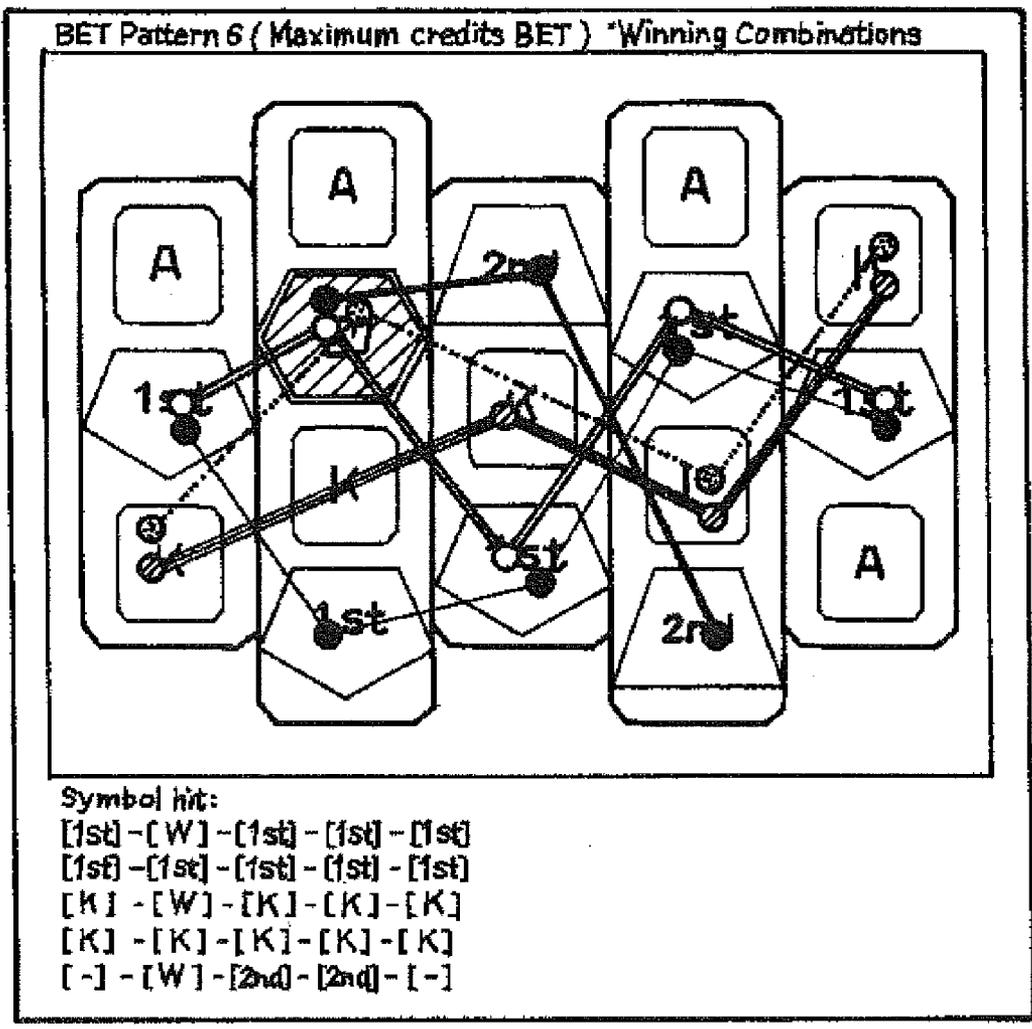


Fig. 8

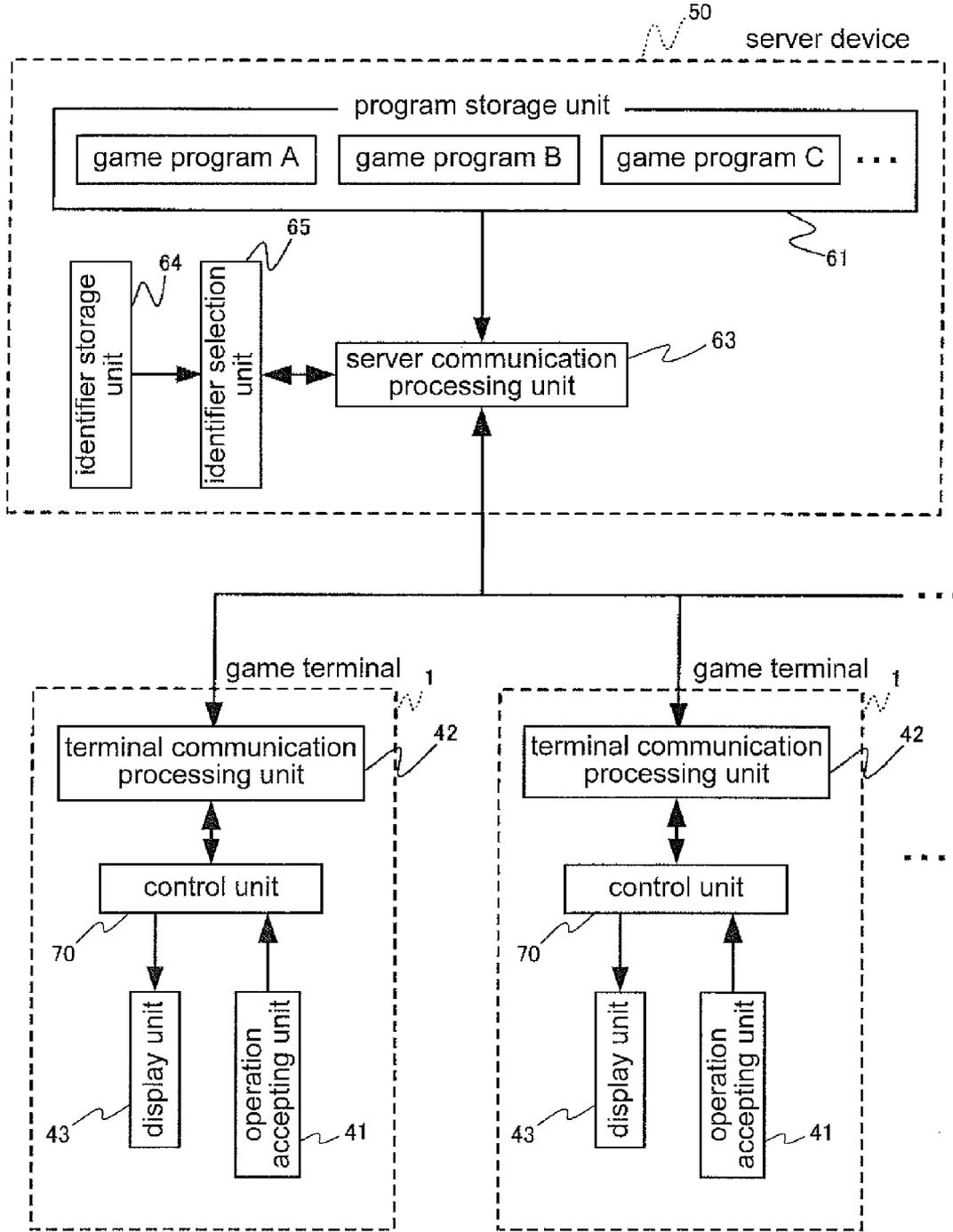


Fig. 9

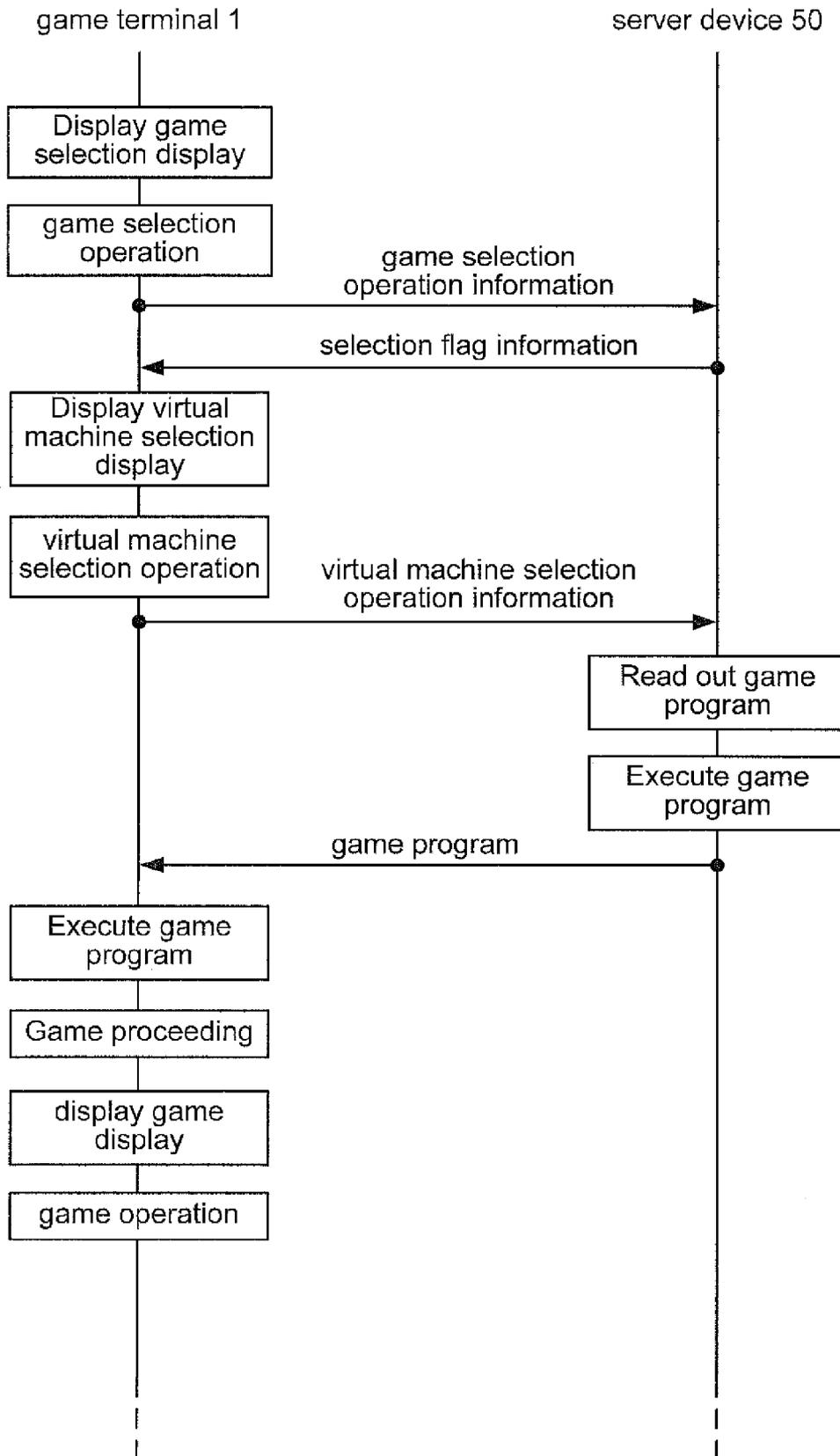


Fig. 10

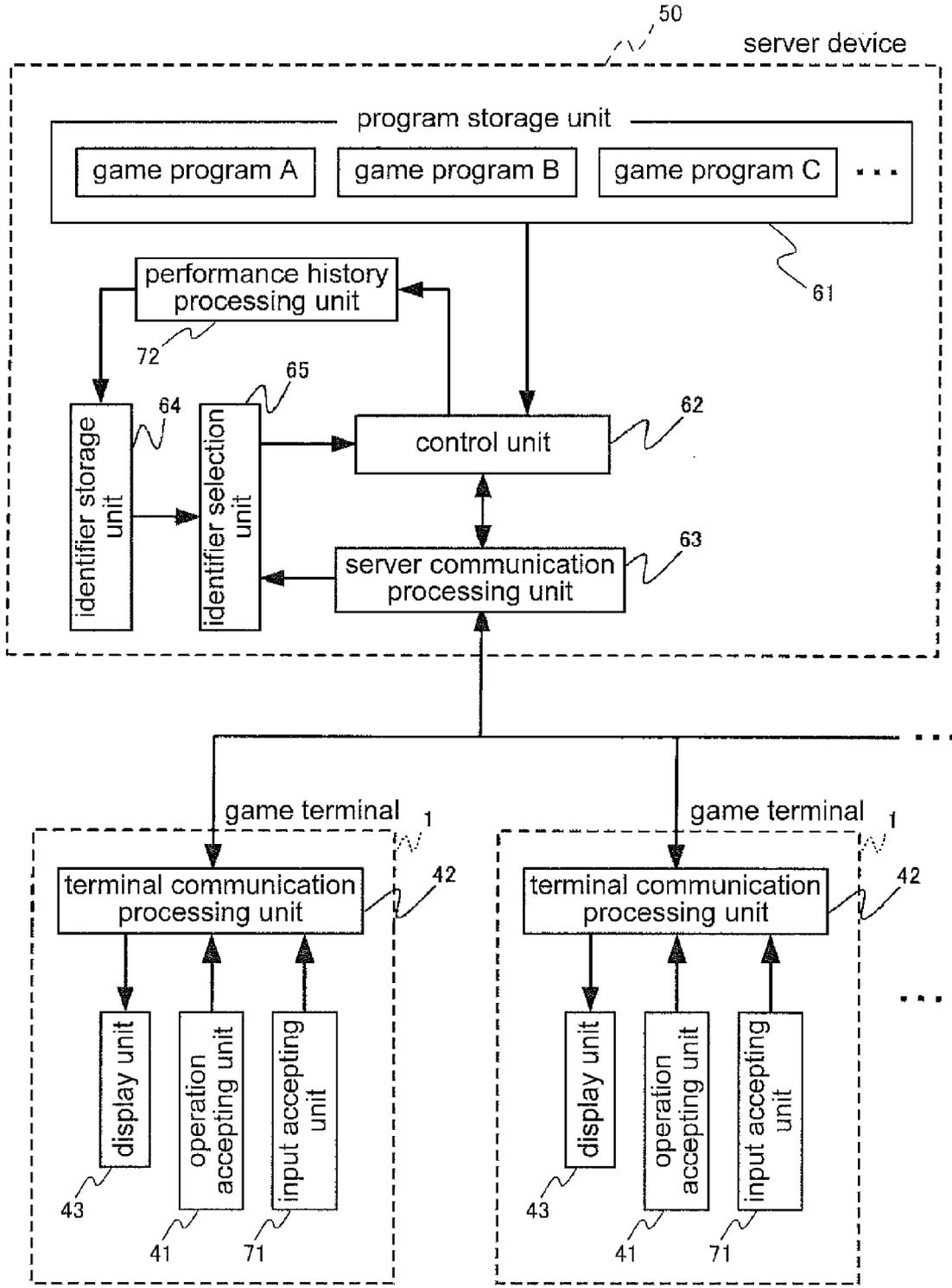


Fig. 11

GAME SYSTEM AND SERVER DEVICE THAT CAN BE USED THEREIN

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims priority to Japan Patent Application No. 2006-065199. The entire disclosure of Japan Patent Application No. 2006-065199 is hereby incorporated herein by reference.

BACKGROUND OF THE INVENTION

[0002] 1. Field of the Invention

[0003] The present invention relates to a game system that is installed in a casino facility and the like, and a server device that can be used in the game system.

[0004] 2. Background Information

[0005] For example, a system described in U.S. Pat. No. 6,409,602 is known as a casino game system of this type. This system comprises a server and a plurality of clients, and the server can execute a plurality of game programs. Each client can access a plurality of game programs executed by the server, and a game image of the accessed game program is displayed on a display unit of the client. Thereafter, a player can play a game on the game program being executed by the server by performing game operations on the client. In such a game system, the player first performs a game selection operation in order to select a game he/she wishes to play to an operation accepting unit. Upon this operation, the game program of the game selected in the game selection operation is executed so that the player can play the game.

[0006] A typical conventional game system comprises a plurality of game devices (game machines) and each game device independently executes a particular game program. Therefore, when the player wishes to play a different game from the one he/she is currently playing, the player has to move from a location where the current game device is to another location where another game device that executes the game program of the game he/she wishes to play. According to the game system of the aforementioned U.S. Pat. No. 6,409,602, a player can play a different game from the one that he/she is currently playing on the same client by performing a game selection operation on the operation accepting unit of that client. This spares the player the trouble of moving around, as is the case in conventional game systems.

[0007] Some typical conventional game systems may comprise a plurality of game devices that execute the same type of game program when they are installed in a relatively large scale facility. In such systems, a player will play a game on a game device that he/she has selected from a plurality of game devices based on his/her own criteria. Because the game program executed by each of these game devices is the same, the game control is also the same no matter which game terminal the player chooses. However, the player tends to think that each game device has a unique character because of the different hardware in each game terminal. Therefore, the player wishes to choose a game device that he/she likes from a plurality of game terminals that execute the same game program and play a game thereon, based on the player's own criteria such as experience, knowledge and information he/she obtained from playing the game in the past. For example, the player may choose the same game device as the one that the player

played and had big wins on in the past or conversely, may not choose the same game device again. Likewise, when the player obtains information about a game device that another player played and had big wins on in the past, the player may choose that game device or may not choose it intentionally. After playing on the game device that the player has thus chosen, the player might confirm that his/her criteria were right, or realize that his/her criteria were wrong and think about adopting different criteria in the future. This is one of the pleasures players have when choosing a game device.

[0008] However, the game system described in the aforementioned U.S. Pat. No. 6,409,602 allows a player to play multiple types of games. As a result, the characteristics of each game device are perceived by a player to be weaker in this system than in a typical conventional game system. In particular, in the game system of U.S. Pat. No. 6,409,602, any game programs played on any clients are executed by the server. Therefore, the characteristics of each game device are perceived to be extremely weak by a player. As a result, the game system described in U.S. Pat. No. 6,409,602 cannot fully provide players with the pleasure of choosing a device (game device) that a typical conventional game system can.

[0009] Note that other than the game system of U.S. Pat. No. 6,409,602, a download type game system may have a similar problem. In the download type game system, a plurality of game programs are stored in a server, and a game program selected by a player at a client is downloaded from the server and executed at the client. Even this type of game system is left with the aforementioned problem because this system is similar to the system of U.S. Pat. No. 6,409,602, in that multiple kinds of game can be played on one client.

[0010] The present invention has been developed in view of the aforementioned problem. In view of the above, it will be apparent to those skilled in the art from this disclosure that there exists a need for an improved game system that is capable of providing players with the pleasure of choosing a game device, and a server device that can be used therein. This invention addresses this need in the art as well as other needs, which will become apparent to those skilled in the art from this disclosure.

SUMMARY OF THE INVENTION

[0011] According to one aspect of the present invention, a game system in which a server device that executes at least one game program, and a plurality of game terminals that provide a game in accordance with the game program to a player by communicating with the server device, are connected so as to allow two-way communication therebetween.

[0012] Each of the plurality of game terminals comprises an operation accepting unit configured to accept a game selection operation for selecting a game program, and a game operation in a game in progress, from a player; a terminal communication processing unit configured to transmit a game program use request corresponding to the game selection operation and game operation information that specifies the game operation to the server device, and configured to receive game data that is provided upon execution of the game program by the server device; and a display unit configured to display a game image based on image information included in the game data received by the terminal communication processing unit.

[0013] The server device comprises a program storage unit configured to store the at least one game program; a server communication processing unit configured to receive the use request and the game operation information from a game terminal; an identifier storage unit configured to store a plurality of different identifiers for a same game program as well as selected/unselected information that indicates whether or not a game program is selected and executed for each of the identifiers; an identifier selection unit configured to specify unselected identifiers among a plurality of identifiers for a game program corresponding to the use request by referring to the selected/unselected information, and configured to select one identifier from the unselected identifiers based on a predetermined condition; and a control unit configured to read out the game program corresponding to the use request from the program storage unit if the unselected identifiers exist, configured to execute the game program that is read out, and configured to control a game executed based on the game program in accordance with the game operation information.

[0014] The server communication processing unit of the server device transmits to the game terminal the selected/unselected information for the plurality of identifiers for the game program corresponding to the use request; and the display unit of the game terminal receiving the selected/unselected information via the terminal communication processing unit, and displaying for each of the plurality of identifiers notification images that shows the selected/unselected information.

[0015] In this thin-client type game system, when the operation accepting unit of the game terminal accepts the game selection operation, a game program use request corresponding to that game selection operation is transmitted to the server device. Thereafter, the control unit of the server device executes the game program according to the use request. This allows a player to play a game based on the game program on the game terminal. In this game system, a plurality of different identifiers are assigned to the same game program. When the server device receives the use request, one identifier is selected from the plurality of identifiers for the game program corresponding to the use request. At this time, only unselected identifiers are selected and selected identifiers are not selected. When the identifier is thus selected, the control unit of the server device executes the game program corresponding to the identifier. Therefore, in this game system, even when there are a plurality of game terminals that can play the same game, identifiers for the same game program of that game executed on those game terminals are different. Also in this game system, a notification image that shows each of the identifiers is displayed on the display unit of each game terminal. The same game program has a plurality of identifiers. And a player can identify each of a plurality of game programs that virtually exist corresponding to the identifiers by the notification image corresponding to each of the identifiers. In this way, it becomes possible to give the player an impression as if a virtual game machine for each identifier exists. Accordingly, this game system can make the player feel that he/she is playing a game on a virtual game machine for each identifier. In other words, this game system can virtually realize a configuration of a typical conventional game system comprising a plurality of independent game machines (real self-contained game devices) each of which executes a particular game program.

[0016] According to another aspect of the present invention, the display unit of the game terminal displays the notification images of each of the plurality of identifiers at a different position.

[0017] In this game system, because the notification image is displayed on a different position for each identifier, the player can identify each notification image even if the notification image having the same image is used. Because each identifier can be identified by its position, the notification image can be simplified by making a part of or the entire image the same.

[0018] According to another aspect of the present invention, the display unit of the game terminal displays the notification images such that whether or not each of the plurality of identifiers is selected is made distinguishable.

[0019] In this game system, the player can know which game corresponding to each identifier corresponding to each notification image is being used by other players by looking at the notification images displayed on the display unit and the like of the game terminal.

[0020] According to another aspect of the present invention, the operation accepting unit of the game terminal further accepts a notification image selection operation for selecting one of the notification images displayed for each of the plurality of identifiers; the terminal communication processing unit of the game terminal transmits notification image selection information for specifying the selected notification image to the server device when the operation accepting unit accepts the notification image selection operation; the server communication processing unit of the server device further receives the notification image selection information from the game terminal; and the selection condition is that if an identifier corresponding to the notification image specified by the notification image information is unselected, the identifier will be selected.

[0021] In this game system, when an identifier corresponding to the notification image specified by the notification image selection operation has not been selected yet, that identifier is selected. Once an identifier is selected, the player can start playing a game corresponding to that identifier. In other words, this game system allows the player to select a virtual game machine for a game that he/she is going to play, and provides the pleasure of choosing a game machine to a player.

[0022] According to another aspect of the present invention, the server device further comprises a performance history processing unit configured to acquire specific performance history information during execution of the game program executed by the control unit, and configured to correlate and store the identifier of the game program executed by the control unit and the specified performance history information in the identifier storage unit.

[0023] In this game system, specific performance history information during the game progress can be known for each virtual game machine corresponding to each identifier. For example, if specific performance history information for each virtual game machine is available to those who run and manage this game system, it will help them manage the game system smoothly and appropriately. Furthermore, various services may be provided to a player using specific performance history information for each virtual game machine.

[0024] According to another aspect of the present invention, each of the plurality of game terminals further com-

prises an input accepting unit configured to accept the input of player identification information; and the performance history processing unit correlates and stores in the identifier storage unit the identifier of the game program executed by the control unit, the specific performance history information, and player identification information of a player who plays a game based on the game program.

[0025] The specific performance history information from a game that the player played on a virtual game machine in the past can be known for each player and each virtual game machine. This has an advantageous effect, in that an even more detailed and appropriate service is provided.

[0026] According to another aspect of the present invention, the display unit of the game terminal displays the notification images and the specific performance history information that are correlated by the identifier.

[0027] In this game system, the specific performance history information together with a notification image corresponding to an identifier correlated therewith are displayed on the display unit and the like of the game terminal. This makes it easier for a player to know the relationship between a virtual game machine corresponding to each notification image, and its specific performance history information.

[0028] According to another aspect of the present invention, a server device is connected to a plurality of game terminals so as to allow two-way communication therewith

[0029] The server device comprises a program storage unit configured to store the at least one game program; a server communication processing unit configured to receive a game program use request corresponding to a game selection operation by a player, and a game operation to a game in progress, from a game terminal; an identifier storage unit for storing a plurality of different identifiers for the same game program, as well as selected/unselected information that indicates whether or not a game program is selected and executed for each of the identifiers; an identifier selection unit configured to specify unselected identifiers among a plurality of identifiers for a game program corresponding to the use request by referring to the selected/unselected information, and configured to select one identifier from the unselected identifiers based on a predetermined condition; and a control unit configured to read out the game program corresponding to the use request from the program storage unit if the unselected identifiers exist, configured to execute the game program that is read out, and configured to control a game executed based on the game program in accordance with the game operation information.

[0030] The server communication processing unit transmits to the game terminal the selected/unselected information for the plurality of identifiers for the game program corresponding to the use request.

[0031] This server device can be used as the server device in the game system according to the present invention. Therefore, it is possible to virtually realize a configuration of a typical conventional game system and to provide the pleasure of choosing a game machine to a player.

[0032] According to another aspect of the present invention, a game system in which a server device that executes at least one game program is connected to a plurality of game terminals so as to allow two-way communication therebetween.

[0033] Each of the plurality of game terminals comprises an operation accepting unit configured to accept from a player a game selection operation for selecting a game

program, and a game operation in a game in progress; a terminal communication processing unit configured to transmit to the server device a game program use request corresponding to the game selection operation; a control unit configured to execute a game program, and configured to control a game executed by the game program in accordance with the game operation information; and a display unit configured to display a game image based on image information included in the game data.

[0034] The server device comprises a program storage unit configured to store the at least one game program; an identifier storage unit configured to store a plurality of different identifiers for the same game program, as well as selected/unselected information that indicates whether or not a game program is selected and downloaded to a game terminal for each of the identifiers; a server communication processing unit configured to receive the game program use request corresponding to the game selection operation from the game terminal; and an identifier selection unit configured to specify unselected identifiers among a plurality of identifiers for a game program corresponding to the use request by referring to the selected/unselected information, and configured to select one identifier from the unselected identifiers based on a predetermined condition.

[0035] The server communication processing unit of the server device transmits to the game terminal the selected/unselected information for the plurality of identifiers for the game program corresponding to the use request, and, if the unselected identifiers exist, reads out the game program corresponding to the use request from the program storage unit and transmits the read out game program to the game terminal that transmitted the use request.

[0036] In addition, the control unit of the game terminal receives the game program corresponding to the use request via the terminal communication processing unit and executes the same; and the display unit of the game terminal receives the selected/unselected information via the terminal communication processing unit and displays for each of the plurality of identifiers notification images that shows the selected/unselected information.

[0037] In this download type game system, when the operation accepting unit of the game terminal accepts a game selection operation, a use request for a game program corresponding to that game selection operation is transmitted to the server device. The control unit provided in the game terminal then downloads the game program from the server device and executes it. Upon this execution, a player can start playing a game on the game terminal. In this game system, a plurality of different identifiers are assigned to the same game program. When the server device receives the use request, one identifier is selected from the plurality of identifiers for the game program corresponding to the use request. At this time, only unselected identifiers are selected and selected identifiers are not selected. When the identifier is thus selected, the control unit of the server device executes the game program corresponding to the identifier. Therefore, in this game system, even when there are a plurality of game terminals that can play the same game, identifiers for the same game program of that game are different. Also in this game system, a notification image that shows each of the identifiers is displayed on the display unit of each game terminal. The same game program has a plurality of identifiers. And a player can identify each of a plurality of game programs that virtually exist corresponding to the identifiers

by the notification image corresponding to each of the identifiers. In this way, it becomes possible to give the player an impression as if a virtual game machine for each identifier exists. Accordingly, this game system can make the player feel that he/she is playing a game on a virtual game machine for each identifier. In other words, this game system can virtually realize a configuration of a typical conventional game system comprising a plurality of independent game machines (real self-contained game devices) each of which executes a particular game program.

[0038] According to another aspect of the present invention, a server device is connected to a plurality of game terminals so as to allow two-way communication therewith, and comprises a program storage unit configured to store at least one game program; an identifier storage unit configured to store a plurality of different identifiers for a same game program as well as selected/unselected information that indicates whether or not a game program is selected and downloaded to a game terminal for each of the identifiers; a server communication processing unit configured to receive a game program use request corresponding to a game selection operation by a player from the game terminal; and an identifier selection unit configured to specify unselected identifiers among a plurality of identifiers for the game program corresponding to the use request by referring to the selected/unselected information, and configured to select one identifier from the unselected identifiers based on a predetermined condition.

[0039] The server communication processing unit transmits to the game terminal the selected/unselected information for the plurality of identifiers for the game program corresponding to the use request, and, if the unselected identifiers exist, reads out the game program corresponding to the use request from the program storage unit and transmits the read out game program to the game terminal that transmitted the use request.

[0040] According to the present invention, a game system that is capable of providing the pleasure of choosing a game device (game machine), and a server device that can be used in the system are provided.

[0041] These and other objects, features, aspects and advantages of the present invention will become apparent to those skilled in the art from the following detailed description, which, taken in conjunction with the annexed drawings, discloses a preferred embodiment of the present invention.

BRIEF DESCRIPTION OF THE DRAWINGS

[0042] Referring now to the attached drawings which form a part of this original disclosure:

[0043] FIG. 1 is a functional block diagram showing the main configuration of a casino game system according to Embodiment 1;

[0044] FIG. 2 is a block diagram showing the hardware configuration of a server device of the casino game system;

[0045] FIG. 3 is an exterior view of a game terminal of the casino game system;

[0046] FIG. 4 is a block diagram showing the hardware configuration of a main control board of the game terminal;

[0047] FIG. 5 is a block diagram showing the hardware configuration of a sub-control board of the game terminal;

[0048] FIG. 6 is a sequence flow diagram showing the process flow when a player plays a game on the game terminal;

[0049] FIG. 7 is a flow chart showing the flow of a slot game based on a game program executed by the server device;

[0050] FIG. 8 is an explanatory diagram showing one example of a pattern of static symbols when determining a win in the slot game;

[0051] FIG. 9 is a functional block diagram showing the main configuration of a casino game system according to Embodiment 2;

[0052] FIG. 10 is a sequence flow diagram showing the process flow when a player plays a game on a game terminal of the casino game system; and

[0053] FIG. 11 is a functional block diagram showing the main configuration of a casino game system according to an alternative embodiment.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0054] Selected embodiments of the present invention will now be explained with reference to the drawings. It will be apparent to those skilled in the art from this disclosure that the following descriptions of the embodiments of the present invention are provided for illustration only and not for the purpose of limiting the invention as defined by the appended claims and their equivalents.

Embodiment 1

[0055] Now, one embodiment of the present invention where the present invention is applied to a casino game system in a licensed casino facility (hereinafter referred to as "Embodiment 1") will be explained. FIG. 1 is a functional block diagram showing the main configuration of the casino game system according to Embodiment 1. This casino game system is a thin-client type game system that is comprised of a plurality of game terminals **1** having no system board, and a server device **50** storing multiple kinds of game programs. In other words, a game based on a game program executed in the server device **50** can be played at each game terminal **1**.

[0056] The game terminal **1** acts as an interface for a player when playing the game, and is installed on a casino floor where the players actually play the game. On the other hand, the server device **50** is installed in a security room, for example, where entry by the players is not permitted. This security room is strictly managed by a casino operator. Each game terminal **1** and the server device **50** are connected via a communication network so as to allow two-way communication therebetween. When all or a portion of the functional elements of the server device **50** are installed in a location away from the casino, they may be connected to the server device **50** via a public telephone line, dedicated telephone line, communication network implemented by a wireless communication line, etc.

Configuration of the Server Device 50

[0057] First, the server device **50** of the casino game system will be explained. FIG. 2 is a block diagram showing the hardware configuration of the server device **50** according to Embodiment 1. The server device **50** comprises a CPU **51**, RAM **52**, ROM **53**, system bus **54**, information storage device **55**, input device **56**, output device **57**, server communication device **58**, etc. Elements such as CPU **51** and RAM **52** exchange data and program instructions and the

like with each other via the system bus 54. A program for operating the server device 50 in accordance with a predetermined sequence is stored in the ROM 53 and information storage device 55, and called up to a working area in the CPU 51 and RAM 52 and executed as necessary. The information storage device 55 stores multiple kinds of game programs A, B, C and so on that can be played selectively on the game terminal 1. A new game program can be added to the information storage device 55 or an existing game program can be deleted therefrom by the casino operating staff operating the input device 56. These game programs may include a game program for a slot machine, and a game program for a table game such as black jack and poker, but is not limited thereto.

[0058] When the server device 50 receives game selection operation information from the game terminal 1, as explained later, the CPU 51 executes a game program specified by the game selection operation information. Image and audio information according to the progress of the game is created by the game program and is transmitted from the server communication device 58 to the game terminal 1, i.e., the source of the game selection operation information. When the game terminal 1 receives the image and audio information, a game display based on the image information and sound effects based on the audio information are outputted. When the player performs a game operation on the game terminal, the game operation information is transmitted to the server device 50. The CPU 51 of the server device 50 that has received the game operation information changes the progress of the game based on the game operation information. This allows the player to play the game that progresses in accordance with the game program executed by the server device 50 on the game terminal 1.

[0059] Note that the server device 50 may be configured as a dedicated control device or may be configured using a general computer system. Also, it may be configured with a single computer or with a plurality of computers connected via a network, each of the plurality of computers being equipped with a plurality of functions.

Configuration of the Game Terminal 1

[0060] Next, the game terminal 1 of the casino game system will be explained. FIG. 3 is a perspective exterior view of the game terminal 1 according to Embodiment 1. The game terminal 1 has a box-shape case 2, a front panel 3 attached to the front side of the case 2 such that it can be opened and closed, and so on. Provided on the front panel 3 are a display window 4 which allows a player to view a monitor 11, a coin slot 5a and bill slot 5b, a spin button 6a, a credit payoff button 6b, BET buttons 7a and 7b used to play a game after a player has inserted coins into the game terminal, a game selection button 8, a coin receiving tray 9 having a coin payout outlet 9a, lamps 10a and 10b, etc. The spin button 6a, credit payoff button 6b, BET buttons 7a and 7b, and game selection button 8 are lamp buttons that include a light emitter.

[0061] The monitor 11 is arranged inside the game terminal 1. This monitor 11 displays a game display based on game display image information transmitted from the server device 50. In the case of a slot game, for example, a plurality of the same or different symbols that are to be arranged in a predetermined arrangement are respectively displayed in five symbol display areas 11a. The monitor 11 is configured

with a CRT display but may also be configured with a plasma display, liquid crystal display, and the like. Also, the monitor 11 is provided with a credit display unit 11b, bet display unit 11c, and winning money display unit 11d above the five symbol display areas 11a. The credit display unit 11b displays the number of credits equivalent to the amount of money that the player has inputted into the coin slot 5a or bill slot 5b (deposit amount). The bet display unit 11c displays a bet that the player has placed using the BET buttons 7a and 7b. The winning money display unit 11d displays the amount of money that the player has won in accordance with the results of a game. The game terminal 1 also internally includes a detection device for detecting whether or not inputted coins and bills are counterfeit, a coin payout device having a hopper capable of holding a large number of coins (not shown), a speaker that serves as a sound output unit, etc. Note, however, that a control unit that executes a game program and progresses the game is not provided in the game terminal 1, but rather in the server device 50 as mentioned earlier.

[0062] A card slot 13 for inserting a house card as a portable recording medium used at the casino, and a display device 14, are provided at the upper part of the game terminal 1. The house card manages personal information that the player has registered at the casino reception and the like. An ID, or unique player identification information for each player, is stored in the house card. The house card is also used by the server device 50 and the like to manage points given to the player in accordance with the amount of money he/she has spent for the game. This makes it easier to award privileges to a player, such as a hotel voucher based on the points. The points that the player has earned, etc. are displayed on the display device 14.

[0063] FIG. 4 is a block diagram showing the hardware configuration of a main control board 20 of the game terminal 1. FIG. 5 is a block diagram showing the hardware configuration of a sub-control board 30 of the game terminal 1. An input/output port 21a of the main control board 20 is used in order to communicate with the sub-control board 30. An input/output port 21b of the main control board 20 is used in order to communicate with the monitor 11, lamps 10a and 10b, speaker 15, various buttons 6a, 6b, 7a 7b and 8, and coin payout device 16. An external input/output port 21c of the main control board 20 is used in order to communicate with the server device 50 via the communication network. Various programs, such as a communication program that are executed by a CPU 21, are stored in a ROM 22 and are outputted to the CPU 21. Note, however, that no game program is stored in the ROM 22. A RAM 23 temporarily stores the processing results and the like of the CPU 21. A video driver 25 controls the display of the monitor 11 under the control of the CPU 21. A light control unit 26 controls the lighting of the lamps 10a and 10b under the control of the CPU 21. A sound control unit 27 controls audio announcements and sound effects and the like that the speaker 15 outputs under the control of the CPU 21. A payout control unit 28 controls the coin payout device 16 so that coins are paid out from the coin payout outlet 9a to the coin receiving tray 9 under the control of the CPU 21. The CPU 21 of the main control board 20 is also connected to the spin button 6a, credit payoff button 6b, BET buttons 7a and 7b, and game selection button 8, and receives operation signals from the input/output port 21b. In addition, the CPU 21 is also connected to a deposit amount counting device

(not shown) that counts the amount of money inserted into the coin slot **5a** and bill slot **5b**.

[0064] The sub-control board **30** comprises a CPU **31**, ROM **32**, RAM **33**, card reader **34**, display driver **24**, input/output ports **36a** and **36b**, etc. The ROM **32** stores data such as various programs, various databases, etc. used by the CPU **31**, which are outputted to the CPU **31**. The RAM **33** temporarily stores the processing results and the like of the CPU **31**. The card reader **34** reads out an ID stored in a house card that is inserted in the card slot **13** and outputs the ID to the CPU **31**. The display driver **35** controls the display of the display device **14** under the control of the CPU **31**. The input/output port **36a** is used for communication with the main control board **20**. The input/output port **36b** is used for communication with the display device **14**.

[0065] As shown in the functional block diagram, the game terminal **1** of Embodiment 1 mainly comprises an operation accepting unit **41**, terminal communication processing unit **42**, and display unit **43**. The operation accepting unit **41** comprises a spin button **6a**, credit payoff button **6b**, BET buttons **7a** and **7b**, game selection button **8**, etc. When a button is operated by the player, an operation signal is transmitted from the input/output port **21b** to the CPU **21** of the main control board **20**. A game selection operation for selecting a game program to be executed by the server device **50** is also included in this operation. The terminal communication processing unit **42** allows a two-way communication with the server device **50**, and mainly comprises the CPU **21**, ROM **22**, RAM **23**, external input/output port **21c**, etc. of the main control board **20**. When the operation accepting unit **41** accepts a game selection operation, which will be described later, the terminal communication processing unit **42** performs a transmission process in order to transmit the game selection operation information (use request) for specifying a game program to be executed by the server device **50** to the server device **50**. When the operation accepting unit **41** accepts various game operations, the terminal communication processing unit **42** transmits the game operation information corresponding to the accepted game operation to the server device **50**. Here, the game operation information is used for control, such as to change the progress of the game in accordance with the game program being executed by the server device **50**. The terminal communication processing unit **42** performs a receiving process in order to receive the image and audio information in accordance with the progress of the game based on the game program being executed by the server device **50**. The display unit **43** comprises the CPUs **21** and **31**, ROMs **22** and **23**, RAMs **23**, **33**, video driver **25**, display driver **35**, monitor **11**, display device **14**, etc. The display unit **43** displays a game image on the monitor **11** and display device **14** based on the image information that the terminal communication processing unit **42** has received. The display unit **43** displays a game selection display on the monitor **11**, which will be described later.

[0066] On the other hand, the server device **50** mainly comprises a program storage unit **61**, control unit **62**, server communication processing unit **63**, identifier storage unit **64** and identifier selection unit **65**. The program storage unit **61** comprises the RAM **52**, ROM **53**, information storage device **55**, and stores multiple kinds of game programs A, B, C and so on. The control unit **62** comprises the CPU **51**, ROM **52**, RAM **53**, system bus **54**, etc., and is capable of executing at least two game programs simultaneously. When

receiving an execution command from the identifier selection unit **65** as explained below, it reads out a game program according to that execution command from the program storage unit **61** and executes it. At this time, if the control unit **62** receives another execution command when a game program for one game terminal **1** is being executed, the control unit **62** executes the former game program while continuing the execution of the latter game program. Also, the control unit **62** transmits, via the server communication processing unit **63**, the image and audio information in accordance with the progress of the game to the game terminal **1**, which transmitted the game selection operation information of the game selection operation information. When the server communication processing unit **63** receives the game operation information, the control unit **62** changes the progress of the game based on the game operation information. The server communication processing unit **63** allows a two-way communication with the game terminal **1**, and mainly comprises the CPU **51**, ROM **52**, RAM **53**, system bus **54**, and server communication device **58**. The server communication processing unit **63** receives the game selection operation information and game operation information that are transmitted from the game terminal **1**. The server communication processing unit **63** also transmits the image and audio information in accordance with the progress of the game based on the game program that the control unit **62** is executing.

[0067] The identifier storage unit **64** comprises RAM **52**, ROM **53**, information storage device **55**, etc. and stores a plurality of different identifiers for the same game program. In other words, the identifiers make it appear that there is a plurality of the same game program, and identify each of them. For example, there are more than two identifiers for a game program A, more than two identifiers for a game program B, and more than two identifiers for a game program C. Note, however, there may be a program that has only one corresponding identifier, or a game program that has no corresponding identifier. Also note that a plurality of virtual machines (virtual game devices) that are capable of executing the same game program are provided, and each of the identifiers for the game program is correlated with each virtual machine.

[0068] The identifier selection unit **65** comprises a CPU **51**, ROM **52**, RAM **53**, system bus **54** and the like. When the server communication processing unit **63** receives game selection operation information (use request), that game selection operation information is transmitted to the identifier selection unit **65**. The identifier selection unit **65** then determines whether or not unselected identifiers exist for the game program corresponding to the game selection operation information. When there are unselected identifiers, the identifier selection unit **65** performs a process in which one identifier is selected from the unselected identifiers in accordance with a predetermined selection condition. As explained below, the selection condition in Embodiment 1 is that an identifier is selected if that identifier is unselected.

[0069] For example, each game terminal **1** transmits notification image selection information together with the game selection operation information to the server device **50**. This notification image selection information indicates which virtual machine has been selected by a player. The notification image identifies each of the identifiers that corresponds to each of a plurality of the same game programs that exist virtually. Simply put, the notification image indicates

whether or not each of a plurality of virtual machines that can execute a selected game is currently used, so that the player can select one from the unused virtual machines. Here, according to the selection condition of Embodiment 1, if an identifier corresponding to notification image selection information is an unselected identifier, that identifier can be selected.

[0070] Note that the selection condition is not limited to the aforementioned condition. It may be that an identifier is selected from unselected identifiers randomly, or that an identifier is selected based on an order of priority predetermined for a plurality of identifiers. Also, when the identifier selection unit 65 selects an identifier, it sets a selection flag on for that selected identifier in the identifier storage unit 64. The identifier selection unit 65 determines whether or not each identifier has already been selected depending on whether or not its selection flag is on. When selecting an identifier, the identifier selection unit 65 also outputs an execution command to the control unit 62 to execute a game program corresponding to that identifier.

[0071] Next, a process flow when a player plays a game on the game terminal 1 is explained. FIG. 6 is a sequence flow diagram showing the process flow when a player plays the game on the game terminal. When the player is about to start playing the game on one game terminal 1, the monitor 11 of that game terminal 1 is usually displaying images of the preceding game played on that game terminal 1. The player can choose to play that game or to play another kind of game that is stored in the program storage unit 61 of the server device 50. When the player chooses to play another type of game, the player first performs an operation on the operation accepting unit 41 in order to call up a game selection display. Upon this operation, the CPU 21 of the game terminal 1 executes a game selection program, reads out game selection display information stored in the ROM 22 and RAM 23, and displays the game selection display on the monitor 11. Note that a case in which the game selection display information is stored in each game terminal 1 is explained in Embodiment 1, but it may be stored in the server device 50 instead. If the game selection display information is stored in the server device 50, the management efficiency will improve because all the game selection display information can be centrally managed. For example, when adding a new game program or deleting an existing game program, all that has to be done is to change the game selection display information stored in the server device 50. In this way, the changes can be made easily.

[0072] A list of available games for the player on the game terminal 1 is displayed on the game selection display. The player then views the game selection display, and, by operating the game selection button 8, performs a game selection operation on the operation accepting unit 41 in order to select a game that the player wishes to play. The game selection operation information corresponding to that operation is transmitted from the terminal communication processing unit 42 to the server device 50. Here, a case where the player has selected a slot game is taken as an example. When the server communication processing unit 63 receives the game selection operation information, the CPU 51 of the server device 50 executes a predetermined notification processing program. Upon this execution, the CPU 51 of the server device 50 specifies a game program based on the game selection operation information, refers to the identifier storage unit 64, and determines whether or not

a selection flag is on for a plurality of identifiers (or one identifier) corresponding to the specified game program. Thereafter, the CPU 51 performs control by which selection flag information that indicates the determination result is sent from the server communication processing unit 63 to the game terminal 1 that has transmitted the game selection operation information. Here, the selection flag information is information (selected/unselected information) that indicates whether a virtual machine is being used or not (selected or unselected). Then, when the game terminal 1 receives the selection flag information by the terminal communication processing unit 42, the CPU 21 displays a virtual machine selection display on the display unit 43. The virtual machine selection display displays a plurality of virtual machine images (notification images) such that each of them is identifiable. Note that a game selected by a game selection operation is provided with a plurality of identifiers, and a virtual machine image (notification image) is provided for each of the identifiers.

[0073] In other words, when a player selects a desired game, a plurality of virtual machine images (notification images) that can execute the selected game are displayed on the display unit 43. This plurality of virtual machine images indicate which virtual machine is being used (selected) and which virtual machine is not being used (unselected) among the plurality of virtual machines on which the selected game can be played. The player can thus know the selectable virtual machines from the virtual machine images.

[0074] In Embodiment 1, each virtual machine image (notification image) is thus displayed on the display unit 43 of the game terminal 1 by cooperation of the game terminal 1 and the server device 50. A notification process in which each virtual machine image (notification image) is displayed on the display unit 43 is executed by a notification processing unit. The notification processing unit comprises the RAM 52, CPU 51, the server communication device 58 and the like of the server device 50; and the external input/output port 21, CPU 21, and the like of the game terminal 1.

[0075] In Embodiment 1, each virtual machine image on a virtual machine selection display is displayed on a different position thereon. An image of a slot machine can be used as a virtual game image, for example. Alternatively, an image of a slot machine with a virtual machine number assigned thereon can be used. In Embodiment 1, an image of slot machine with a virtual machine number is used for the virtual machine image. Each virtual machine image may be the same image or may be a different image. In Embodiment 1, however, a virtual machine image corresponding to an identifier that has already been selected by the identifier selection unit 65 (selected identifier) is at least made different from a virtual machine image corresponding to an identifier not yet selected by the identifier selection unit 65 (unselected identifier). Specifically, the virtual machine image corresponding to an unselected identifier is displayed in color; the virtual machine image corresponding to a selected identifier in gray.

[0076] A specific control will be explained below. The CPU 21 of the game terminal 1 executes the predetermined notification processing program. Upon this execution, the CPU 21 of the game terminal 1 determines whether each of the identifiers corresponding to the game program is selected or unselected based on selection flag information. A virtual machine selection display is displayed on the display unit 43 where a virtual machine image corresponding to an identifier

determined to have been already selected is displayed in gray, and a virtual machine image corresponding to an identifier determined not to have been selected is displayed in color. Then, a player views the virtual machine selection display and performs a virtual machine selection operation (notification image selection operation). The virtual machine selection operation is an operation on the operation accepting unit 41 in which a player selects a virtual machine image with a desired virtual machine number. At this time, the operation accepting unit 41 accepts a virtual machine selection operation in which a virtual machine image with an unselected identifier (virtual machine image displayed in color) is selected, but does not accept a virtual machine selection operation in which a virtual machine image with a selected identifier (virtual machine image displayed in gray) is selected. Alternatively, a virtual machine image in gray may be made unselectable from the beginning. When the operation accepting unit 41 receives the virtual machine selection operation, virtual machine selection operation information corresponding to that operation is transmitted from the terminal communication processing unit 42 to the server device 50.

[0077] When the server communication processing unit 63 of the server device 50 receives the virtual machine selection operation information, the identifier selection unit 65 of the server device 50 refers to the identifier storage unit 64 and determines whether or not the virtual machine (identifier) specified by the virtual machine selection operation information has already been selected based on its selection flag. If it is determined that the identifier has not been selected (selection flag off), its selection flag is changed from off to on. Further, the identifier selection unit 65 outputs, to the control unit 62, an execution command to execute a game program corresponding to the identifier, i.e., a game program specified by the game selection operation information that the server communication processing unit 63 has currently received.

[0078] When the control unit 62 of the server device 50 receives the execution command from the identifier selection unit 65, it reads out a game program corresponding to the execution command from the program storage unit 62 and executes it. Upon this execution, the slot game is initiated on the game terminal 1 that has transmitted the virtual machine selection operation information. The control unit 62 of the server device 50 controls the server communication processing unit 63 to transmit image information in accordance with the progress of the slot game to the game terminal 1 that has transmitted the virtual machine selection operation information. After receiving the image information, the terminal communication processing unit 42 of the game terminal 1 displays a game display based on the image information on the display unit 43. The player can then play the slot game he/she has selected.

[0079] In Embodiment 1, a game program that the control unit 62 of the server device 50 executes is the same no matter which virtual machine image in a virtual machine selection display is selected by the player. Here, the player can select a virtual machine image in the virtual machine selection display before he/she starts playing the slot game. The player cannot select a virtual machine image that is already selected by another player. Therefore, when the player selects a virtual machine, it is as if he/she is choosing a real game machine. Accordingly, a player who plays a slot game based on the game program executed by the server device 50

can feel as if he/she is playing the slot game on a virtual game machine (virtual machine) that he/she has selected.

[0080] FIG. 7 is a flow chart showing the flow of the slot game based on the game program executed by the server device 50. First, when a coin (not shown) is inserted into the coin slot 5a or bill slot 5b of the game terminal 1 by a player, the deposit amount is counted by the deposit amount counting device (not shown). Thereafter, the CPU 21 of the main control board 20 in the game terminal performs a credit adding process, in which the number of credits equivalent to the deposit amount counted by the deposit amount counting device are added to the credit data stored in the RAM 23.

[0081] After deciding an amount to bet, the player operates the BET buttons 7a and 7b of the game terminal 1 in order to place the bet (S1). When the operation accepting unit 41 receives this bet operation (game operation), the bet operation information (game operation information) is transmitted to the server device 50 from the terminal communication processing unit 42. When the server communication processing unit 63 of the server device 50 receives this bet operation information, the control unit 62 of the server device 50 changes the progress of the slot game according to the bet operation information. In other words, the game status is changed where the spin button 6a can accept a spin operation (game operation). Specifically, the control unit 62 creates image information based on the bet operation information, and transmits it to the game terminal 1 from the server communication processing unit 63. When the terminal communication processing unit 42 of the game terminal 1 receives this image information, the amount of the bet according to the bet operation information is displayed on the bet display unit 11c. When the operation accepting unit 41 accepts the bet operation, the CPU 21 of the main control board 20 of the game terminal 1 performs a process in which the number of credits according to the bet operation is reduced from the credit data of the RAM 23 (S2).

[0082] Thereafter, when the player operates the spin button 6a of the game terminal 1 (S3), the operation accepting unit 41 accepts that spin operation (game operation). Then, the spin operation information (game operation information) is transmitted to the server device 50 from the terminal communication processing unit 42. When the server communication processing unit 63 of the server device 50 receives this spin operation information, the control unit 62 of the server device 50 changes the progress of the slot game in accordance with the spin operation information. For example, the symbols displayed on the five symbol display areas 11a of the display unit 43 are symbols that are changed randomly one after another. Specifically, image information for changing the symbols to be displayed on the five symbol display areas 11a one after another is transmitted from the server communication processing unit 63 to the game terminal 1. On the game terminal 1 that has received this image information with its terminal communication processing unit 42, the symbols are displayed randomly on the five symbol display areas 11a in accordance with the received image information (S4).

[0083] When the server communication processing unit 63 receives the spin operation information, the control unit 62 of the server device 50 generates five random numbers (S5), and performs a process in which the symbols to be displayed statically in the symbol display areas 11a are determined. Specifically, the control unit 62 compares the five generated random numbers with their respective stoppage position

tables. The stoppage position table is provided for each symbol display area 11a. Based on each of the random numbers and stoppage position tables, the control unit 62 determines the stoppage position in the symbol display areas 11a of each of the symbols that have been displayed randomly.

[0084] Further, when the server communication processing unit 63 receives the spin operation information, the control unit 62 of the server device 50 compares a combination of the five random numbers with a win determination table, and performs a prize drawing process which determines whether or not any prizes have been won (S6). In Embodiment 1, the prizes are mainly categorized as prizes which award the player predetermined credits, and prizes which allow the player to play an event, bonus game, and feature game that are categorized in a special game status. Then, based on the combination of the random numbers, and the win determination table, the control unit 62 of the server device 50 determines which prize the player has won from the current slot game, or that no prize has been won. In the following explanation, the former prize is taken as an example.

[0085] In Embodiment 1, each win determination table is made to determine a win when a symbol corresponding to one prize is displayed statically in any one of the symbol displaying areas and in its adjacent symbol displaying areas, in relation to the stoppage position table. In other words, an arrangement pattern of the symbols displayed statically in all of the symbol display areas 11a is determined by the five generated random numbers and the stoppage position tables. A winning prize is determined by comparing a combination of symbols that are displayed statically in any one of the symbol display areas 11a and its adjacent symbol display areas with the win determination table. For example, when the symbols displayed in the adjacent symbol display areas are in a predetermined arrangement, a prize is won.

[0086] FIG. 8 is an explanatory diagram showing one example of a pattern of the symbols statically displayed when determining a win. In this example, five prizes are won. For the purpose of explanation, the five symbol display areas 11a are referred to, from left to right in FIG. 8, a first symbol display area, second symbol display area, third symbol display area, fourth symbol display area, and fifth symbol display area. As mentioned above, if the symbol corresponding to one same prize is displayed statically on any one of the symbol display areas and its adjacent symbol display areas, a prize will be won. With reference to FIG. 8, all of the symbol display areas have a "1st" symbol statically displayed thereon. Therefore, the "First" prize corresponding to the five "1st" symbols is won. Meanwhile, a "W" symbol is statically displayed on the second symbol display area. Here, a "W" symbol can be treated as a "1st" symbol. Therefore, similar to the aforementioned case, another "First" prize corresponding to the five "1st" symbols is won. All of the symbol display areas have a "K" symbol statically displayed thereon. Therefore, the "King" prize corresponding to the five "K" symbols is won. Meanwhile, a "W" symbol is statically displayed on the second symbol display area. This "W" symbol can be treated as a "K" symbol. Therefore, similar to the aforementioned case, the "King" prize corresponding to the five "K" symbols is won. Furthermore, a "2nd" symbol is statically displayed in the third and fourth symbol display areas, and a "W" symbol is statically displayed in the second symbol display area.

Because a "W" symbol can also be treated as "2nd" symbol, the "Second" prize corresponding to three "2nd" symbols is won. Note that a prize will be won only when more than three adjacent symbol display areas display a symbol corresponding to the same prize in Embodiment 1. Therefore, with reference to FIG. 8, although an "A" symbol is statically displayed in the first and second symbol display areas, because neither an "A" nor a "W" symbol is displayed in the third symbol display area, this does not constitute the "Ace" prize. Of course, the number of adjacent symbol display areas with the same symbol to win a prize may be set to be more than two or four instead of three. In Embodiment 1, even a prize corresponding to the same symbol may be treated as a different prize if the number of the same symbols is different. More specifically, even for a prize corresponding to a "1st" symbol, the "First" prize corresponding to three "1st" symbols, the "First" prize corresponding to four "1st" symbols, and the "First" prize corresponding to five "1st" symbols are considered to be different prizes. Accordingly, the dividend amount will be different for each prize. The more symbols there are, the bigger the dividend will become.

[0087] In Embodiment 1, the prize is won when a symbol corresponding to one prize is statically displayed in any one of the symbol display areas and in its adjacent areas, but the method for determining a win is not limited thereto. A typical slot game may be employed in which a prize is won when the same symbol is displayed statically on a prize-winning line that lies across all of the symbol display areas, as well as various kinds of slot games.

[0088] When the prize drawing process has thus been completed, and after a predetermined time period has elapsed since the spin operation information was received, the control unit 62 of the server device 50 changes the progress of the slot game so that the random display of symbols in the symbol display areas 11a is stopped at a stoppage position determined by the five random numbers and the stoppage position tables. Specifically, image information for stopping the random display of the five symbol display areas 11a is transmitted from the server communication processing unit 63 to the game terminal 1. When the terminal communication processing unit 42 of the game terminal 1 receives the image information, the random display of the five symbol display areas 11a is stopped according to the received image information (S7).

[0089] On the other hand, if, in the prize drawing process, a prize in which predetermined credits will be awarded to the player is decided (S8), the control unit 62 of the server device 50 transmits prize winning information that indicates the winning of the prize from the server communication processing unit 63 to the game terminal 1. When the terminal communication processing unit 42 of the game terminal 1 receives this prize winning information, the CPU 21 of the main control board 20 performs a process for paying out the dividend (S9). Specifically, the CPU 21 of the main control board 20 performs a payout process in which credits according to the winning prize are added to the credit data stored in the RAM 23. Also included in the prize winning information of Embodiment 1 is a lamp control instruction, information regarding sound effects, etc. Therefore, when the terminal communication processing unit 42 of the game terminal 1 receives the prize winning information, the CPU 21 of the main control board 20 outputs a control instruction to the light control unit 26 in accordance with the lamp

control instruction. In this way, the light control unit **26** performs a lighting process in which the lamp buttons provided with the light emitter such as the lamps **10a** and **10b**, spin button **6a**, credit payoff button **6b**, BET buttons **7a** and **7b**, game selection button **8**, etc. that are left on are made to flash with a flashing pattern in accordance with the control instruction. Also, the CPU **21** of the main control board **20** transmits sound effect information to the sound control unit **27**. Then, the sound control **27** pauses the music that has been outputted from the speaker **15** as accompanying music, and outputs the sound effects from the speaker **15**. In this way, the various lamp buttons of the game terminal **1** are flashed and sound effects are outputted from the speaker **15**.

[0090] When the player playing the slot game on the game terminal **1** as explained above feels like playing another game, the player will perform an operation to call up the game selection display to the operation accepting unit **41**. The game selection display will be displayed on the monitor **11** as described above. Then, the player selects another game by operating the game selection button **8** and further performs a virtual machine selection operation in a virtual machine selection display. After the player selects a virtual machine image with a desired virtual machine number, the player can play another game that he/she selected.

[0091] According to Embodiment 1, a plurality of different identifiers are assigned to the same game program. And each of the virtual machine images (notification images) corresponding to each of the plurality of different identifiers is displayed on the display unit **43** of the game terminal **1** such that each of them is identifiable. The player then performs a game selection operation and further selects a virtual machine image with a desired virtual machine number so that the player can play a game corresponding to the game selection operation. For the player, it is as if he/she is choosing a real game machine when selecting the virtual machine image. Therefore, the player will feel that he/she is actually playing the game on a virtual game machine (virtual machine) that he/she has selected. In this way, the player can enjoy the similar pleasure of choosing a game machine given by the typical conventional game system comprising a plurality of independent game machines (real self-contained game devices), each of which executes a particular game program.

Embodiment 2

[0092] Next, another embodiment will be explained in which the present invention is applied to a casino game system similar to that of Embodiment 1 (hereinafter referred to as "Embodiment 2"). FIG. 9 is a functional block diagram showing the main configuration of the casino game system according to Embodiment 2. This casino game system is a download type game system. The server device **50** stores multiple types of game programs. Each game terminal **1** downloads a game program that the player has selected from the server device **50** and executes it. Each game terminal **1** is installed on a casino floor where the players actually play the game. The server device **50** is installed in a security room as in Embodiment 1. Each game terminal **1** and the server device **50** are connected via a communication network so as to allow two-way communication therebetween. When some or all of the functional elements of the server device **50** are installed at a location away from the casino, they may be connected to the server device **50** via a public telephone line, dedicated telephone line, communication network achieved

by a wireless communication line, etc. The hardware configurations of the game terminal **1** and the server device **50** are essentially identical to those described in Embodiment 1, so an explanation therefor is omitted.

[0093] The game terminal **1** according to Embodiment 2 comprises a control unit **70** in addition to the operation accepting unit **41**, terminal communication processing unit **42**, and display unit **43** that the game terminal **1** of Embodiment 1 also comprises. The terminal communication processing unit **42** of Embodiment 2 transmits game selection operation information that identifies the type of game program to be downloaded from the server device **50** to the server device **50** after the operation accepting unit **41** has accepted game selection operation. The terminal communication processing unit **42** also receives the game program corresponding to the game selection operation information. The control unit **70** executes the game program that the terminal communication processing unit **42** has received, and changes the progress of the game in accordance with game operation information. The control unit **70** also performs control by which game images are displayed on the monitor **11** and display device **14** in accordance with the game progress, and sounds for the sound effects are outputted from the speaker **15**. In other words, the control unit **70** of Embodiment 2 controls the progress of the game in a similar manner to the control unit **62** of Embodiment 1.

[0094] In Embodiment 2, the control unit **70** provided for each game terminal only has to be capable of executing a single game program, and does not have to be capable of executing a plurality of game programs in parallel as the control unit **62** provided in the server device **50** in Embodiment 1 does. Therefore, the processing ability required from the control unit **70** according to Embodiment 2 is much less than the processing ability required from the control unit **62** of Embodiment 1. Therefore, the control unit **70** of Embodiment 2 can be constructed at a much lower cost than the control unit **62** of Embodiment 1.

[0095] Here, in the typical conventional game system, each of a plurality of game machines (real self-contained game devices) independently executes a particular game program. Therefore, each game machine is equipped with many functions in order to execute its game program. In the casino game system of Embodiment 1, on the other hand, many of the functions that were conventionally provided in a game machine are omitted from each game terminal **1**, and are centralized in the server device **50**. This dramatically reduces the costs for each game terminal **1**, thus reducing the costs for the entire system. Although the game terminal **1** is provided with the control unit in the casino game system of Embodiment 2, it is possible to reduce costs as much as the casino system of Embodiment 1 does.

[0096] The control unit **62** is included in the server device **50** of Embodiment 1, but is not included in the server device **50** of Embodiment 2. In other words, the server device **50** of Embodiment 2 is not equipped with the function of executing the game program and controlling the progress of the game. Note that the other functions are almost identical to the ones the server device **50** of Embodiment 1 is equipped with.

[0097] Next, the process flow when a player plays a game on the game terminal **1** will be explained. FIG. 10 is a sequence flow diagram showing the process flow when the player plays the game on the game terminal **1**. When the player is about to start playing the game at one game

terminal 1, the monitor 11 of that game terminal 1 is usually displaying images from the preceding game that was played on the game terminal 1. The player can choose to play that game or to play another kind of game that is stored in the program storage unit 61 of the server device 50. Similar to Embodiment 1, when the player chooses to play another type of game, the player will perform an operation to call up the game selection display to the operation accepting unit 41. Then, the game selection display is displayed on the monitor 11. Also in Embodiment 2, a case will be explained in which the game selection display information is stored in each game terminal 1, but it may be stored in the server device 50 as explained in Embodiment 1.

[0098] The player then views the game selection display displayed on the monitor 11, and, by operating the game selection button 8, performs a game selection operation on the operation accepting unit 41 to select a game that the player wishes to play. The game selection operation information corresponding to that operation is transmitted from the terminal communication processing unit 42 to the server device 50. Here, similar to Embodiment 1, a case in which the player has selected a slot game is taken as an example. When the server communication processing unit 63 of the server device 50 receives this game selection operation information, the CPU 51 of the server device 50 executes a predetermined notification processing program. Upon this execution, the CPU 51 of the server device 50 specifies a game program based on the game selection operation information in a similar manner to Embodiment 1, and checks whether or not each of the identifiers for the game program has the selection flag on. The CPU 51 of the server device 50 also transmits selection flag information that indicates the check result from the server communication processing unit 63 to the game terminal 1 that is a source of the game selection operation information. When the terminal communication processing unit 42 of the game terminal 1 receives the selection flag information, a virtual machine selection display is displayed on the display unit 43 by the CPU 21 executing the predetermined notification processing program.

[0099] Thereafter, the player views the virtual machine selection display and selects a virtual machine image with a desired virtual machine number. Then, virtual machine selection operation information corresponding to this virtual machine selection operation (notification image selection operation) is transmitted from the terminal communication processing unit 42 to the server device 50. When the server communication processing unit 63 of the server device 50 receives the virtual machine selection operation information, as in Embodiment 1, the identifier selection unit 65 of the server device 50 determines whether or not the virtual machine (identifier) specified by the received virtual machine selection operation information has already been selected. If it has not been selected, the identifier selection unit 65 of the server device 50 outputs an execution command to the control unit 62 to execute the game program corresponding to the identifier, as well as setting its selection flag on.

[0100] When the control unit 62 of the server device 50 receives the execution command from the identifier selection unit 65, it reads out the game program corresponding thereto from the program storage unit 61 and transmits it to the game terminal that has transmitted the virtual machine selection operation information. When the terminal commu-

nication processing unit 42 of the game terminal 1 receives the game program, the game program is temporarily stored in a game program storage region of the RAM 23. Thereafter, the control unit 70 of the game terminal 1 executes the game program stored in the RAM 23 and initiates the slot game. Specifically, the control unit 70 displays the game display according to the executed game program on the display unit 43. This allows the player to play the slot game that the player has selected. Then, the player performs a game operation such as the bet operation and spin operation mentioned above to the operation accepting unit 41 which changes the progress of the game, and the slot game proceeds further. Note that the control of the slot game is identical with that of Embodiment 1, except that the control unit 70 provided in the game terminal 1 executes the game program, and therefore an explanation thereof will be omitted.

[0101] The game program that is temporarily stored in the game program storage region of the RAM 23 may be deleted when the player chooses a different game as the next game to play. In this case, the game program storage region of the RAM 23 only needs to have a capacity for one game program, therefore costs can be reduced. When the remaining capacity of the game program storage region of the RAM 12 is smaller than the volume of the downloaded program, some (the game program that was first downloaded, for example) or all of the game programs stored in that game program storage region, may be deleted. In this case, if the game program that the player has selected is still in the RAM 23, that game program can be executed without a need to transmit the game selection operation information to the server device 50. In this way, the communication data volume between each game terminal 1 and the server device 50 can be reduced, and the degradation of overall performance of the casino game system can be minimized.

[0102] As described above, a plurality of different identifiers are assigned to the same game program also in Embodiment 2. And each of the virtual machine images (notification image) corresponding to each of the plurality of different identifiers is displayed on the display unit 43 of the game terminal 1 in a way that each of them is identifiable. Then, the player performs a game selection operation and further selects a virtual machine image with a desired virtual machine number so that the player can play a game corresponding to the game selection operation. For the player, it is as if he/she is choosing a real game machine when selecting the virtual machine image. Therefore, the player is given the impression that he/she is actually playing the game on a virtual game machine (virtual machine) that he/she has selected. In this way, a player can enjoy a similar pleasure of choosing a game machine given by the typical conventional game system comprising a plurality of independent game machines (real self-contained game devices), each of which executes a particular game program.

ALTERNATIVE EMBODIMENT

[0103] Next, an alternative embodiment of the aforementioned Embodiment 1 and Embodiment 2 will be explained. A casino game system in this alternative embodiment is a thin-client game system similar to that of Embodiment 1. Note, however, that this alternative embodiment may also be applied to a download type game system similar to that of Embodiment 2. Hardware configurations of the game ter-

terminal 1 and the server device 50 are essentially identical to those described in Embodiment 1, and thus an explanation thereof is omitted.

[0104] FIG. 11 is a functional block diagram showing the main configuration of a casino game system according to the alternative embodiment. The game terminal 1 in the alternative embodiment comprises an input accepting unit 71 in addition to the operation accepting unit 41, terminal communication processing unit 42, and display unit 43 that the game terminal 1 in Embodiment 1 also comprises. The input accepting unit 71 comprises the card slot 13, card reader 34 and the like, and accepts an ID, or player identification information stored in the house card. Specifically, the card reader 34 reads out the ID stored in the house card inserted into the card slot 13, and transmits the ID to the terminal communication processing unit 42. The terminal communication processing unit 42 in the alternative embodiment outputs the ID received from the input accepting unit 71 to the server device 50.

[0105] On the other hand, the server device 50 in the alternative embodiment comprises a performance history processing unit 72 in addition to the program storage unit 61, control unit 62, server communication processing unit 63, identifier storage unit 64 and identifier selection unit 65 that the game terminal 1 in Embodiment 1 also comprises. The performance history processing unit 72 comprises a CPU 51, ROM 52, RAM 53, system bus 54, and the like. The performance history processing unit 72 performs a process in which specific performance history information during the execution of a game program is stored in the identifier storage unit 64. Here, the performance history information is correlated with an identifier that corresponds to the game program executed by the control unit 62, and the ID that is received by the server communication processing unit 63 from the game terminal 1, and is stored. In this alternative embodiment, the specific performance history to be stored is the number of times that the game progress is in a specific progress state in a predetermined time period in the past, the type of specific progress state, and the like. More specifically, the specific performance history to be stored is the number of times that a large amount of credit has been paid out, and the number of times that a specific event has occurred and its type in the game based on the game program executed by the control unit 62 of the server device 50. Taking the aforementioned slot game as an example, the number of times that a prize that allows the player to play the event, the number of times a bonus game and feature game is won, the type of prize, and the like are stored as the performance history information. In this alternative embodiment, an example has been shown in which a history is obtained when the game progress status is in a specific game state, however, the example is not limited thereto so long as obtaining a history is beneficial. What type of performance state history should be obtained will be decided as necessary depending on how it is to be used.

[0106] Performance history information thus stored in the identifier storage unit 64 of the server device 50 can be used in various ways. In the present alternative embodiment, the number of times that a prize that allows the player to play the event, the number of times a bonus game and feature game is won, and the type of prize, are used as specific performance history information, and this performance history information is correlated with the identifier and ID, and is stored. In this case, for example, when the server device 50

receives game selection operation information and an ID from the game terminal 1, it transmits specific performance history information correlated with that ID to the game terminal 1 together with the selection flag information explained above. The game terminal 1 that has received such information will display, on the display unit 43, a display in which each virtual machine image corresponding to each identifier is correlated with performance history information as a virtual machine selection display. By looking at the virtual machine selection display, a player can know how many times a particular prize is won for each of the virtual machines he/she played in the past. Accordingly, one player might select a virtual machine image of a virtual machine that has won the most number of prizes for the event, and another player might select a virtual machine image of a virtual machine that has not yet won the prize for the event. In this way, each player can select a virtual machine image based on his/her own criteria, which increases the pleasure of selecting a machine (virtual machine).

[0107] In the present alternative embodiment, specific performance history information is correlated with an ID and identifier and stored, but it is also useful to correlate specific performance history information not with an ID but only with an identifier, and to store it. For example, the specific performance history information for each identifier is useful when a floor manager and the like of the casino facility manage the casino game system. In other words, the specific performance history information for each virtual machine is useful. This can be useful for a player, too. For example, when the performance history information corresponding to each virtual machine image is displayed on a virtual machine selection display, the player's own performance history information as well as other players' is displayed. Note that each virtual machine image and performance history information are correlated by an identifier. In this way, a player can know how many times a particular prize is won for the slot game played by the player him/herself as well as by other players in a predetermined time period. Such information is useful when the player selects a virtual machine. Accordingly, the pleasure of selecting a machine (virtual machine) increases. When specific performance history information is correlated only with an identifier but not with an ID as mentioned above, the game terminal 1 does not necessarily have to be provided with the input accepting unit 71.

[0108] According to the alternative embodiment, specific performance history information during the execution of a game program can be known for each virtual machine corresponding to each identifier. This also allows, for example, a floor manager of this game system to manage the system more smoothly and accurately. Furthermore, various services may be provided where specific performance history information for each virtual machine is used to increase the pleasure of choosing a machine (virtual machine).

[0109] In the aforementioned Embodiments and the alternative embodiment, the operation accepting unit 41 comprises buttons, but the operation accepting unit 41 may also be a touch panel on the monitor 11. In the aforementioned embodiments and alternative embodiment, when the player performs a game selection operation on a game selection display, a display is changed to a virtual machine selection display, prompting the player to perform a virtual machine selection operation in order to start a game. Here, a plurality of virtual machine images displayed on the virtual machine

selection display are virtual machine images corresponding to the game selection operation. The display of a virtual machine selection display is not limited to the aforementioned one, but may also be the following display. For example, a game selection display that displays virtual machine images for more than two types of games may be displayed from the beginning. When the player performs an operation to select any one of the virtual machine images on the game selection display, both virtual machine selection operation information for the selected virtual machine image and game selection operation information for the game corresponding to the selected virtual machine image may be sent to the server device 50. In this case, because both the game and the virtual machine image are selected in a single operation, the operation can be simplified. In the aforementioned embodiments and the alternative embodiment, the virtual machine images are displayed on the monitor 11 that comprises the display unit 43 in a way that each of the virtual machine images is identifiable, but they may be displayed on the display device 14. In this case, the player performs a virtual machine selection operation to the operation accepting unit 41 to select a virtual machine image from the virtual machine images displayed on the display device 14.

[0110] A computer program that will cause a computer to execute the above-described methods, and computer-readable recording media that store the program, are within the scope of the present invention. The computer-readable recording media include flexible discs, hard disc drives, CD-ROM, MO, DVD, DVD-ROM, DVD-RAM, BD (Blue-Ray Discs), and semiconductor memory, for example. The computer program is not limited to that which is stored on recording media, and that which is transmitted through telecommunication lines, radio or cable communication lines, or networks including the Internet.

General Interpretation of Terms

[0111] In understanding the scope of the present invention, the term “configured” as used herein to describe a component, section or part of a device includes hardware and/or software that is constructed and/or programmed to carry out the desired function. In understanding the scope of the present invention, the term “comprising” and its derivatives, as used herein, are intended to be open ended terms that specify the presence of the stated features, elements, components, groups, integers, and/or steps, but do not exclude the presence of other unstated features, elements, components, groups, integers and/or steps. The foregoing also applies to words having similar meanings such as the terms, “including”, “having” and their derivatives. Also, the terms “part,” “section,” “portion,” “member” or “element” when used in the singular can have the dual meaning of a single part or a plurality of parts. Finally, terms of degree such as “substantially”, “about” and “approximately” as used herein mean a reasonable amount of deviation of the modified term such that the end result is not significantly changed. For example, these terms can be construed as including a deviation of at least $\pm 5\%$ of the modified term if this deviation would not negate the meaning of the word it modifies.

[0112] While only selected embodiments have been chosen to illustrate the present invention, it will be apparent to those skilled in the art from this disclosure that various changes and modifications can be made herein without departing from the scope of the invention as defined in the appended claims. Furthermore, the foregoing descriptions of

the embodiments according to the present invention are provided for illustration only, and not for the purpose of limiting the invention as defined by the appended claims and their equivalents.

What is claimed is:

1. A game system in which a server device that executes at least one game program, and a plurality of game terminals that provide a game in accordance with the game program to a player by communicating with the server device, are connected so as to allow two-way communication therebetween,

wherein each of the plurality of game terminals comprises:

an operation accepting unit configured to accept a game selection operation for selecting a game program, and a game operation in a game in progress, from a player;

a terminal communication processing unit configured to transmit a game program use request corresponding to the game selection operation and game operation information that specifies the game operation to the server device, and configured to receive game data that is provided upon execution of the game program by the server device; and

a display unit configured to display a game image based on image information included in the game data received by the terminal communication processing unit; and

the server device comprises:

a program storage unit configured to store the at least one game program;

a server communication processing unit configured to receive the use request and the game operation information from a game terminal;

an identifier storage unit configured to store a plurality of different identifiers for a same game program as well as selected/unselected information that indicates whether or not a game program is selected and executed for each of the identifiers;

an identifier selection unit configured to specify unselected identifiers among a plurality of identifiers for a game program corresponding to the use request by referring to the selected/unselected information, and configured to select one identifier from the unselected identifiers based on a predetermined condition; and

a control unit configured to read out the game program corresponding to the use request from the program storage unit if the unselected identifiers exist, configured to execute the game program that is read out, and configured to control a game executed based on the game program in accordance with the game operation information;

the server communication processing unit of the server device transmitting to the game terminal the selected/unselected information for the plurality of identifiers for the game program corresponding to the use request; and

the display unit of the game terminal receiving the selected/unselected information via the terminal communication processing unit, and displaying for each of the plurality of identifiers notification images that shows the selected/unselected information.

2. The game system according to claim 1, wherein the display unit of the game terminal displays the notification images of each of the plurality of identifiers at a different position.

3. The game system according to claim 1, wherein the display unit of the game terminal displays the notification images such that whether or not each of the plurality of identifiers is selected is made distinguishable.

4. The game system according to claim 1, wherein the operation accepting unit of the game terminal further accepts a notification image selection operation for selecting one of the notification images displayed for each of the plurality of identifiers;

the terminal communication processing unit of the game terminal transmits notification image selection information for specifying the selected notification image to the server device when the operation accepting unit accepts the notification image selection operation;

the server communication processing unit of the server device further receives the notification image selection information from the game terminal; and

the selection condition is that if an identifier corresponding to the notification image specified by the notification image information is unselected, the identifier will be selected.

5. The game system according to claim 1, wherein the server device further comprises a performance history processing unit configured to acquire specific performance history information during execution of the game program executed by the control unit, and configured to correlate and store the identifier of the game program executed by the control unit and the specified performance history information in the identifier storage unit.

6. The game system according to claim 5, wherein each of the plurality of game terminals further comprises an input accepting unit configured to accept the input of player identification information; and

the performance history processing unit correlates and stores in the identifier storage unit the identifier of the game program executed by the control unit, the specific performance history information, and player identification information of a player who plays a game based on the game program.

7. The game system according to claim 5, wherein the display unit of the game terminal displays the notification images and the specific performance history information that are correlated by the identifier.

8. A server device connected to a plurality of game terminals so as to allow two-way communication therewith, the server device comprising:

a program storage unit configured to store the at least one game program;

a server communication processing unit configured to receive a game program use request corresponding to a game selection operation by a player, and a game operation to a game in progress, from a game terminal;

an identifier storage unit for storing a plurality of different identifiers for the same game program, as well as selected/unselected information that indicates whether or not a game program is selected and executed for each of the identifiers;

an identifier selection unit configured to specify unselected identifiers among a plurality of identifiers for a

game program corresponding to the use request by referring to the selected/unselected information, and configured to select one identifier from the unselected identifiers based on a predetermined condition; and

a control unit configured to read out the game program corresponding to the use request from the program storage unit if the unselected identifiers exist, configured to execute the game program that is read out, and configured to control a game executed based on the game program in accordance with the game operation information;

the server communication processing unit transmitting to the game terminal the selected/unselected information for the plurality of identifiers for the game program corresponding to the use request.

9. A game system in which a server device that executes at least one game program is connected to a plurality of game terminals so as to allow two-way communication therebetween,

wherein each of the plurality of game terminals comprises:

an operation accepting unit configured to accept from a player a game selection operation for selecting a game program, and a game operation in a game in progress;

a terminal communication processing unit configured to transmit to the server device a game program use request corresponding to the game selection operation;

a control unit configured to execute a game program, and configured to control a game executed by the game program in accordance with the game operation information; and

a display unit configured to display a game image based on image information included in the game data;

the server device comprises:

a program storage unit configured to store the at least one game program;

an identifier storage unit configured to store a plurality of different identifiers for the same game program, as well as selected/unselected information that indicates whether or not a game program is selected and downloaded to a game terminal for each of the identifiers;

a server communication processing unit configured to receive the game program use request corresponding to the game selection operation from the game terminal; and

an identifier selection unit configured to specify unselected identifiers among a plurality of identifiers for a game program corresponding to the use request by referring to the selected/unselected information, and configured to select one identifier from the unselected identifiers based on a predetermined condition;

the server communication processing unit of the server device transmitting to the game terminal the selected/unselected information for the plurality of identifiers for the game program corresponding to the use request, and, if the unselected identifiers exist, reading out the game program corresponding to the use request from the program storage unit and transmitting the read out game program to the game terminal that transmitted the use request;

the control unit of the game terminal receiving the game program corresponding to the use request via the terminal communication processing unit and executing the same; and

the display unit of the game terminal receiving the selected/unselected information via the terminal communication processing unit and displaying for each of the plurality of identifiers notification images that shows the selected/unselected information.

10. The game system according to claim 9, wherein the display unit of the game terminal displays the notification images of each of the plurality of identifiers at a different position.

11. The game system according to claim 9, wherein the display unit of the game terminal displays the notification images such that whether or not each of the plurality of identifiers is selected is made distinguishable.

12. The game system according to claim 9, wherein the operation accepting unit of the game terminal further accepts a notification image selection operation configured to select one of the notification images displayed for each of the plurality of identifiers;

the terminal communication processing unit of the game terminal transmits notification image selection information configured to specify the selected notification image to the server device when the operation accepting unit accepts the notification image selection operation;

the server communication processing unit of the server device further receives the notification image selection information from the game terminal; and

the selection condition is that if an identifier corresponding to the notification image specified by the notification image information is unselected, the identifier is selected.

13. The game system according to claim 9, wherein the server device further comprises a performance history processing unit configured to acquire specific performance history information during execution of the game program executed by the control unit, and for correlate and store the identifier of the game program executed by the control unit and the specified performance history information in the identifier storage unit.

14. The game system according to claim 13, wherein each of the plurality of game terminals further comprises an input accepting unit configured to accept the input of player identification information; and

the performance history processing unit correlates and stores in the identifier storage unit the identifier of the game program executed by the control unit, the specific performance history information, and player identification information of a player who plays a game based on the game program.

15. The game system according to claim 13, wherein the display unit of the game terminal displays the notification images and the specific performance history information that are correlated by the identifier.

16. A server device connected to a plurality of game terminals so as to allow two-way communication therewith, the server device comprising:

a program storage unit configured to store at least one game program;

an identifier storage unit configured to store a plurality of different identifiers for a same game program as well as selected/unselected information that indicates whether or not a game program is selected and downloaded to a game terminal for each of the identifiers;

a server communication processing unit configured to receive a game program use request corresponding to a game selection operation by a player from the game terminal; and

an identifier selection unit configured to specify unselected identifiers among a plurality of identifiers for the game program corresponding to the use request by referring to the selected/unselected information, and configured to select one identifier from the unselected identifiers based on a predetermined condition;

the server communication processing unit transmitting to the game terminal the selected/unselected information for the plurality of identifiers for the game program corresponding to the use request, and, if the unselected identifiers exist, reading out the game program corresponding to the use request from the program storage unit and transmitting the read out game program to the game terminal that transmitted the use request.

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