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Okada(10) **Pub. No.: US 2006/0068915 A1**(43) **Pub. Date: Mar. 30, 2006**(54) **GAMING SERVER AND GAMING SYSTEM**(52) **U.S. Cl. 463/42**(75) Inventor: **Kazuo Okada**, Tokyo (JP)

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(2006.01)

(57) **ABSTRACT**

A gaming server and a gaming system which provides a player with the fascinating aspect of a game, while preventing inappropriate alteration of the gaming object data, and in which the advantage of the player who can use the gaming object data can be carried on to another player. Specifically, this gaming server is a gaming server which is connected to a gaming machine on which can be played a game using an image of a gaming object which shows a figure or other object appearing in a game, the gaming server comprising changing means for changing the correspondence between gaming object data indicating the characteristics of each gaming object and player information for identifying a player who can utilize the gaming object data in the game.

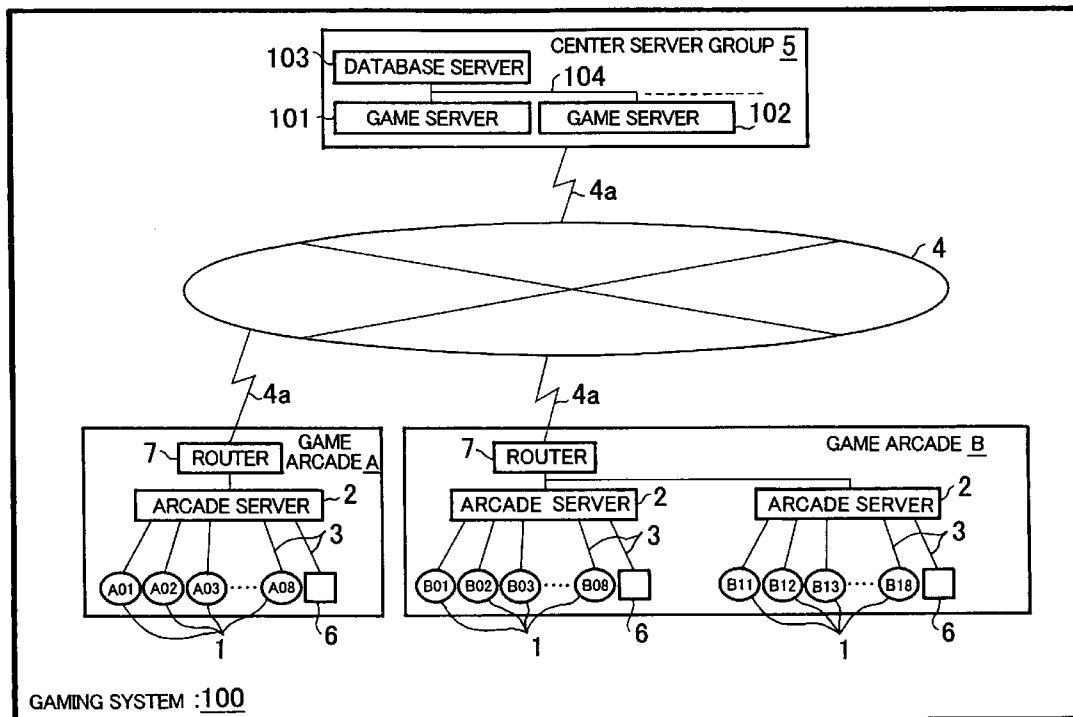


FIG. 1

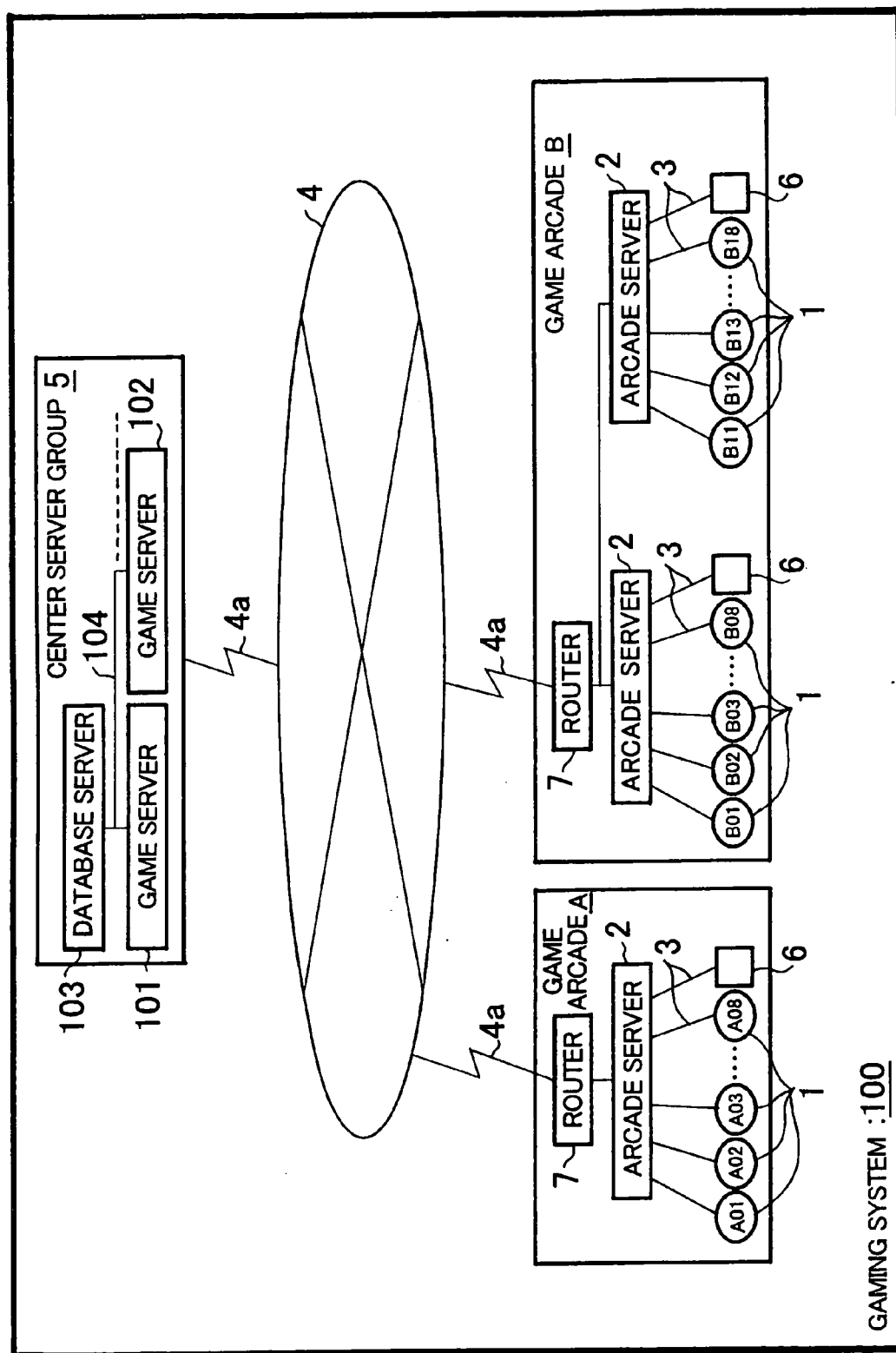


FIG. 2

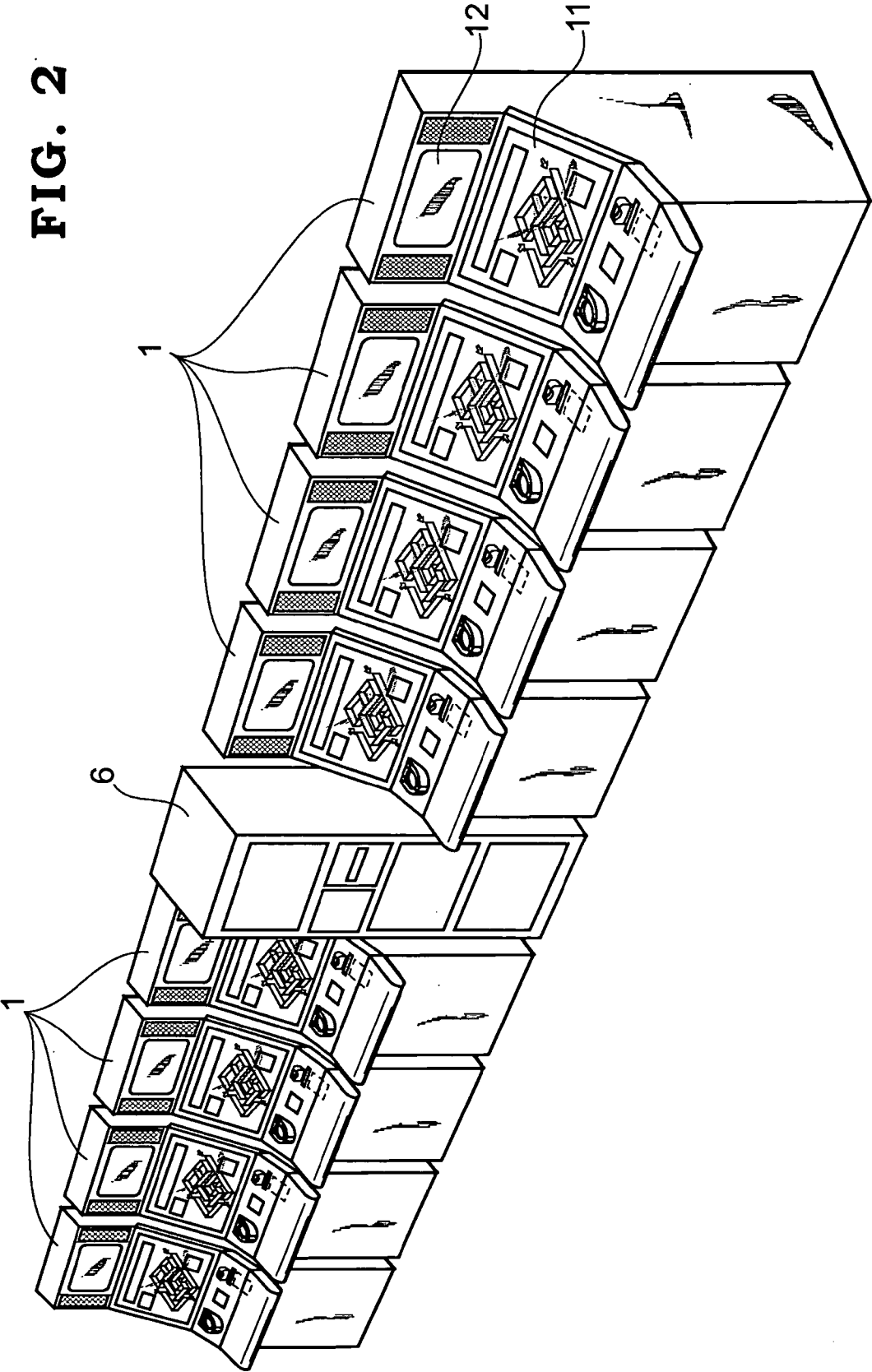


FIG. 3

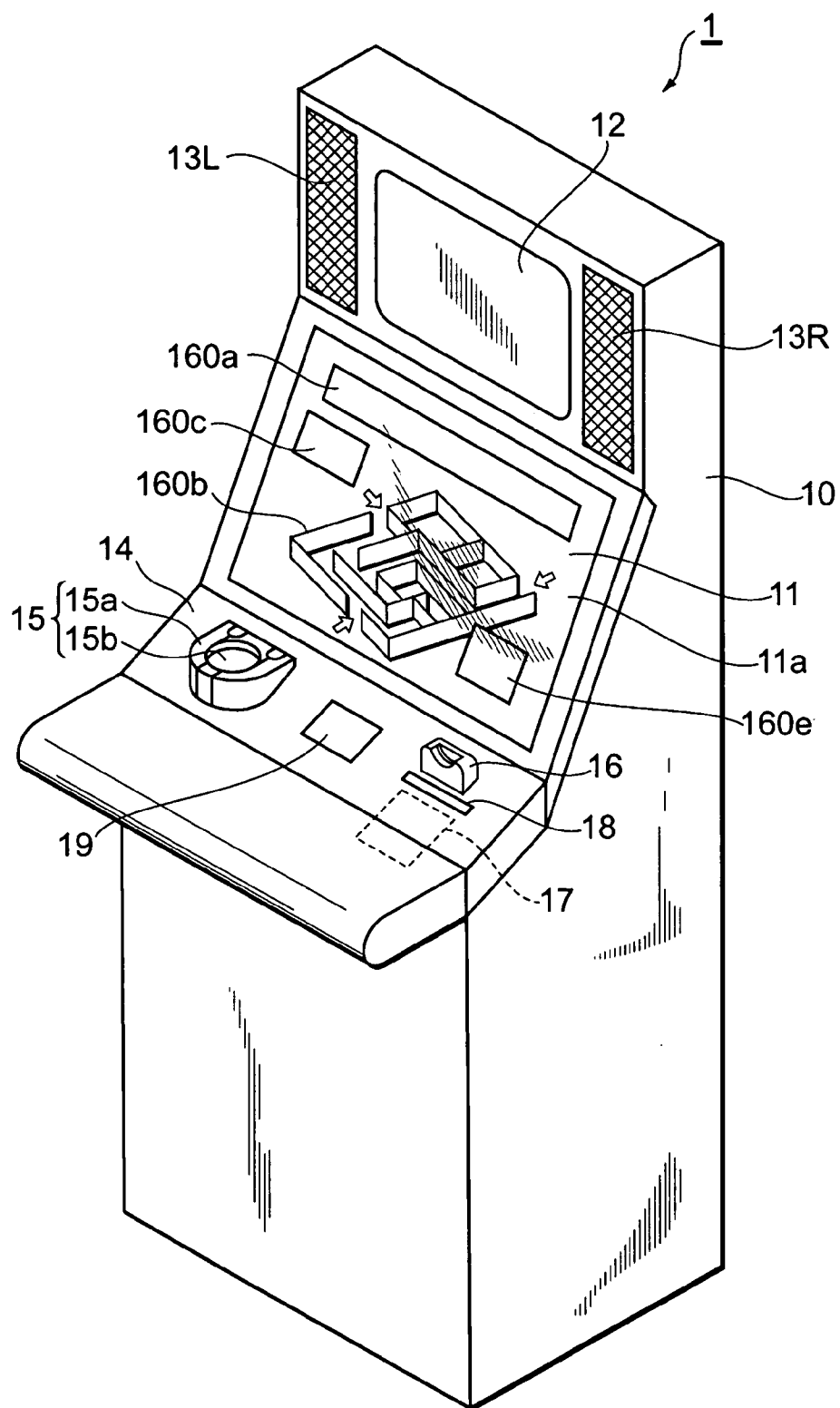


FIG. 4

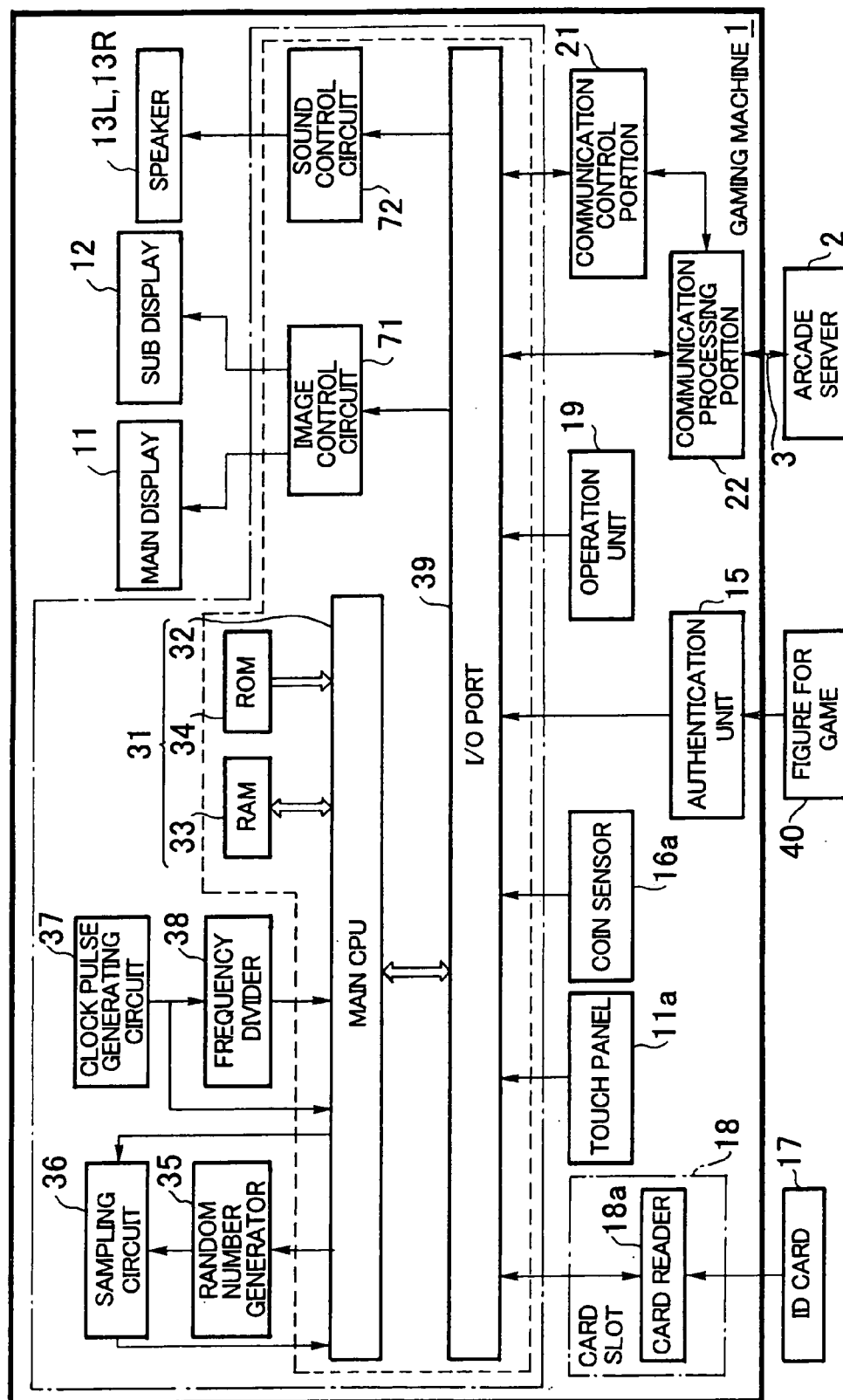


FIG. 5

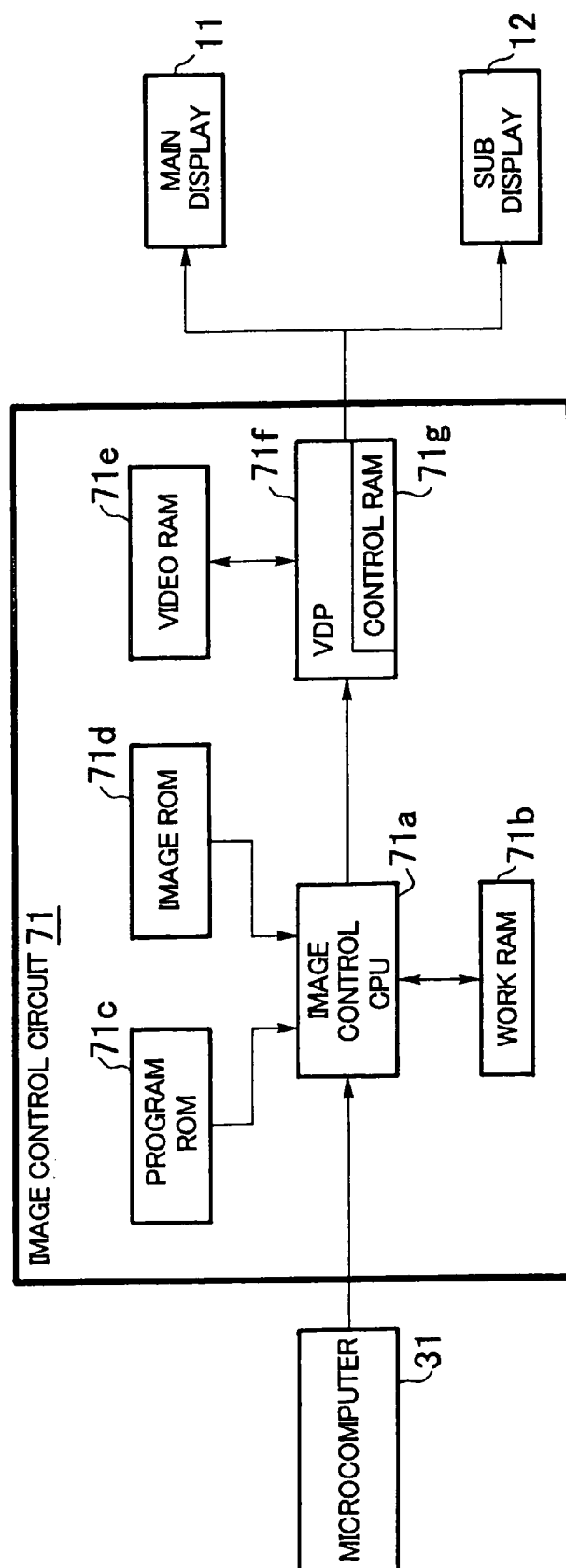


FIG. 6

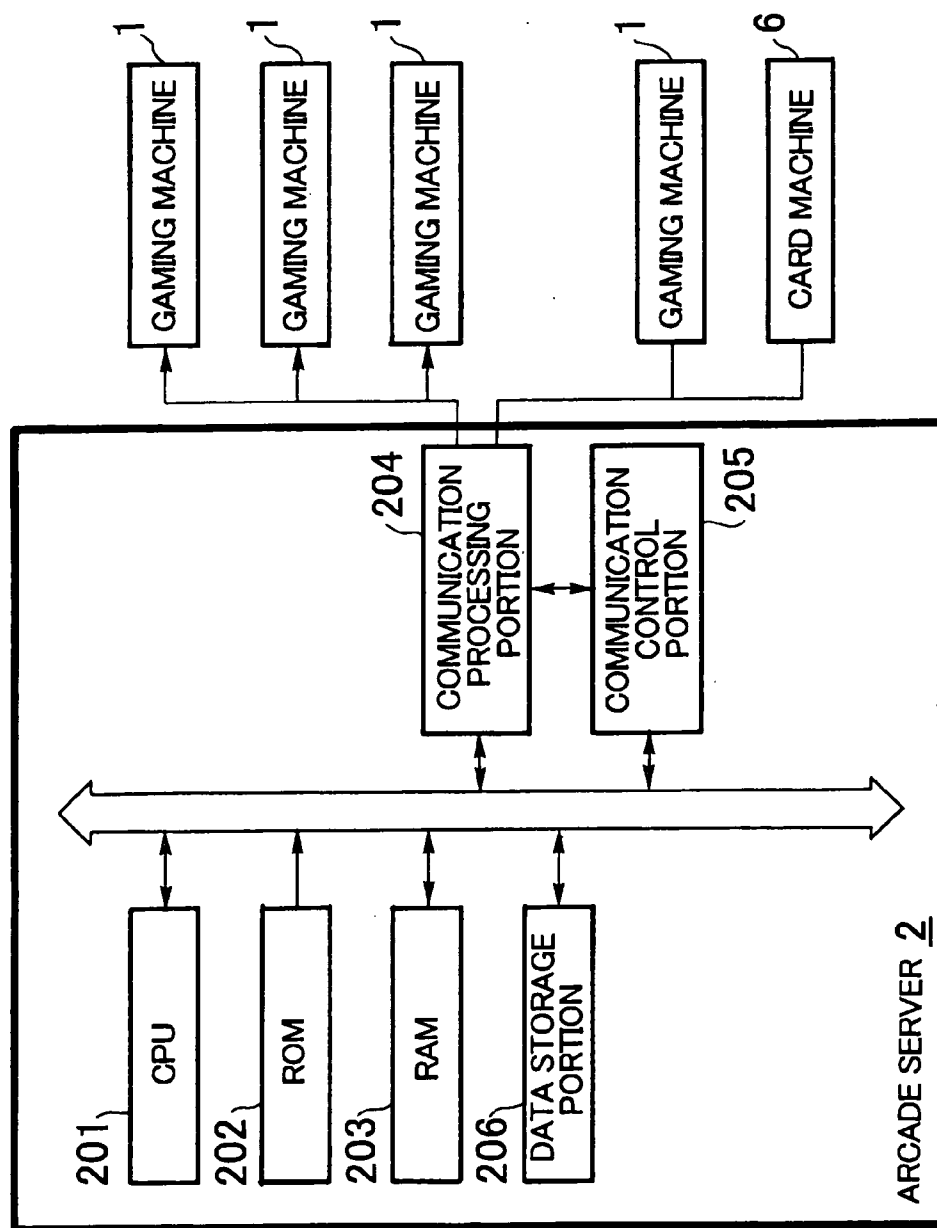


FIG. 7

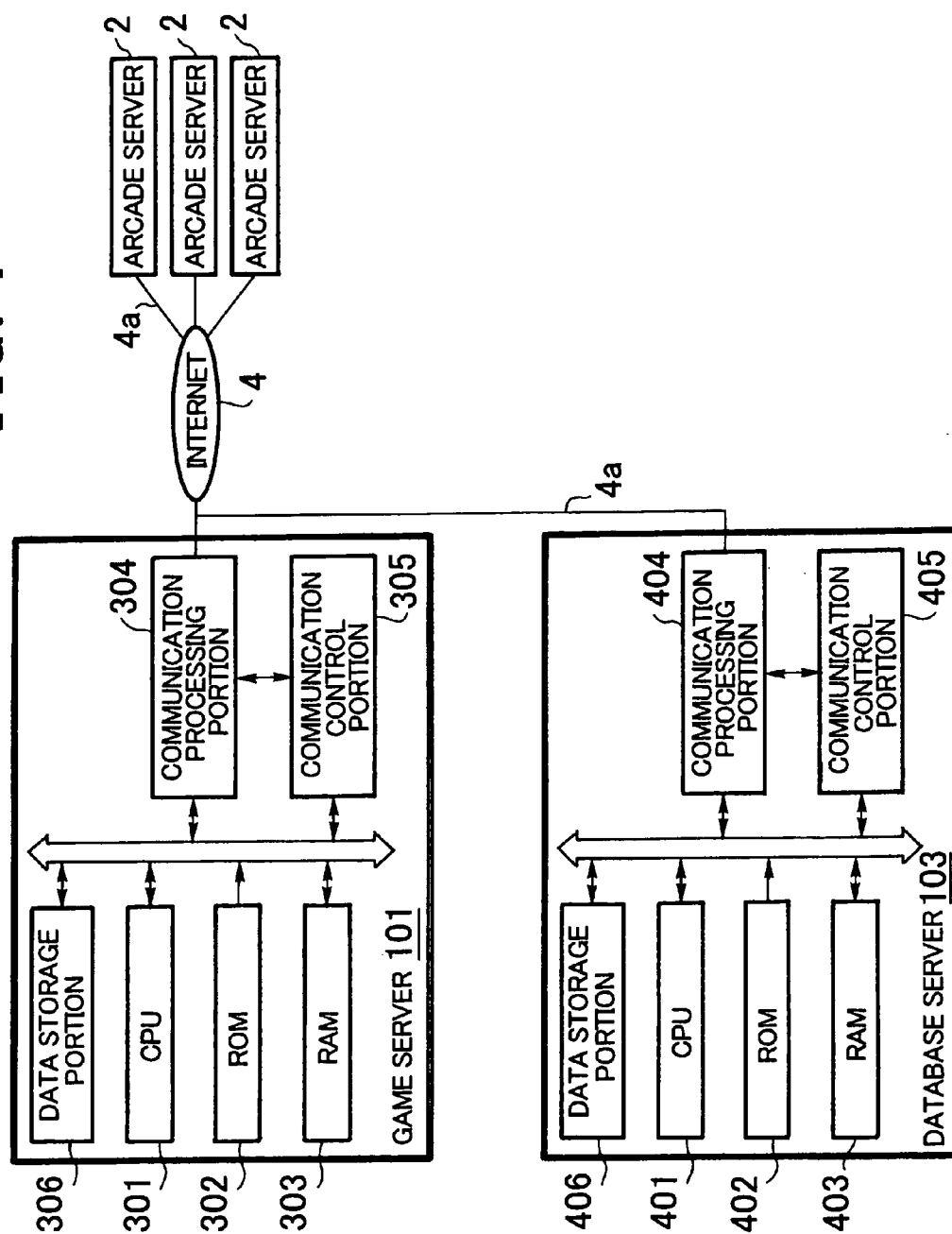


FIG. 8

60

60a	60b	60c	60d	60e	60f	60g	60h	60i
PLAYER ID	FIGURE ID	FIGURE TYPE	SURVIVAL POWER	MAGICAL POWER	ATTACKING POWER	DEFENSIVE POWER AGAINST A PHYSICAL ATTACK	MAGICAL ATTACKING POWER	MAGICAL DEFENSIVE POWER
0001	1000	PLAYER	100	20	200	50	20	20
0012	1101	PLAYER	150	40	100	10	20	100

61

62

60A

60B

FIG. 9

60

	60a	60b	60c	60d	60e	60f	60g	60h	60i
	PLAYER ID	FIGURE ID	FIGURE TYPE	SURVIVAL POWER	MAGICAL POWER	ATTACKING POWER	DEFENSIVE POWER AGAINST A PHYSICAL ATTACK	MAGICAL ATTACKING POWER	MAGICAL DEFENSIVE POWER
63	0012	1000	PLAYER	100	20	200	50	20	20
64	0001	1101	PLAYER	150	40	100	10	20	100

60A 60B

FIG. 10

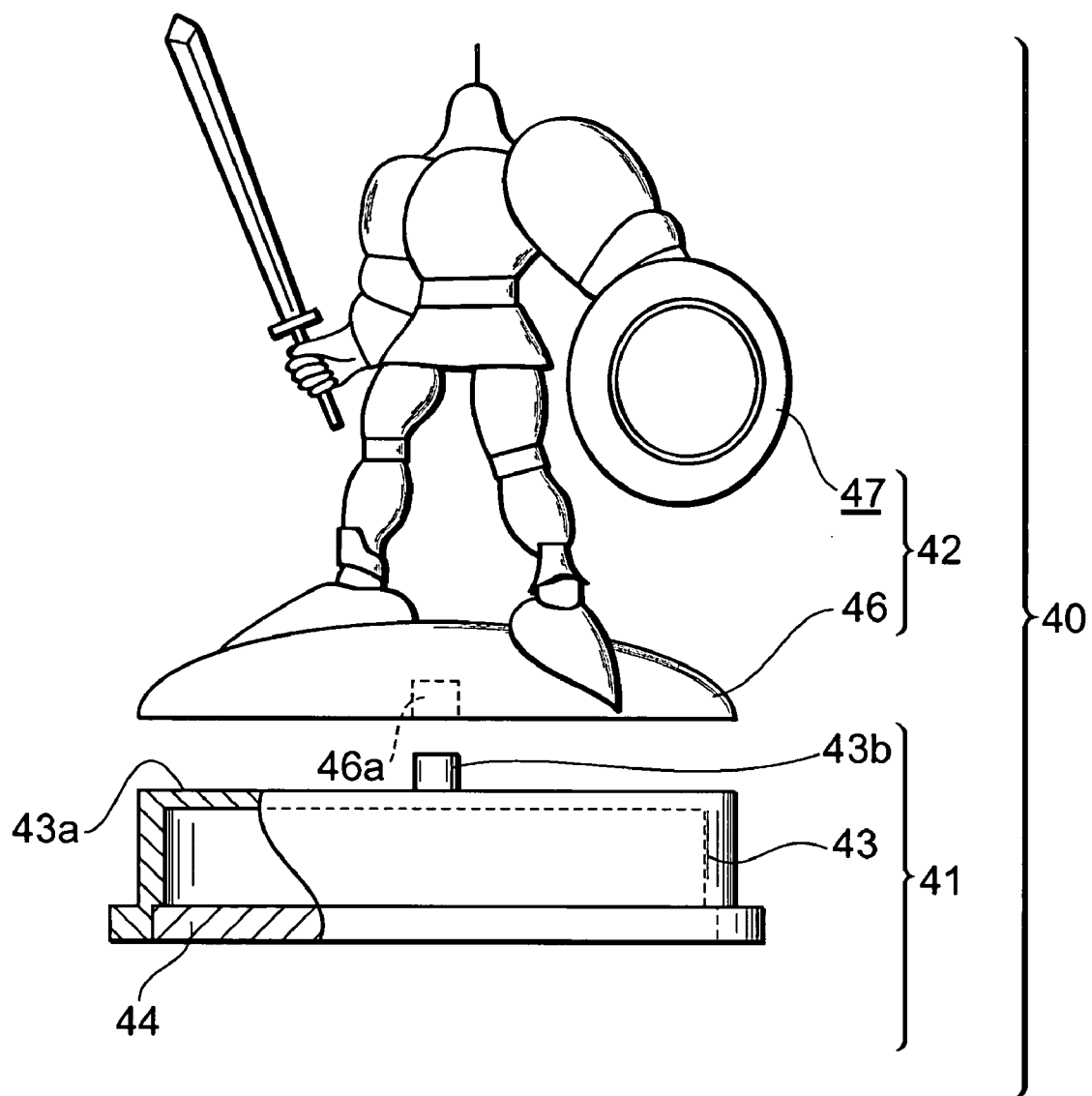


FIG. 11

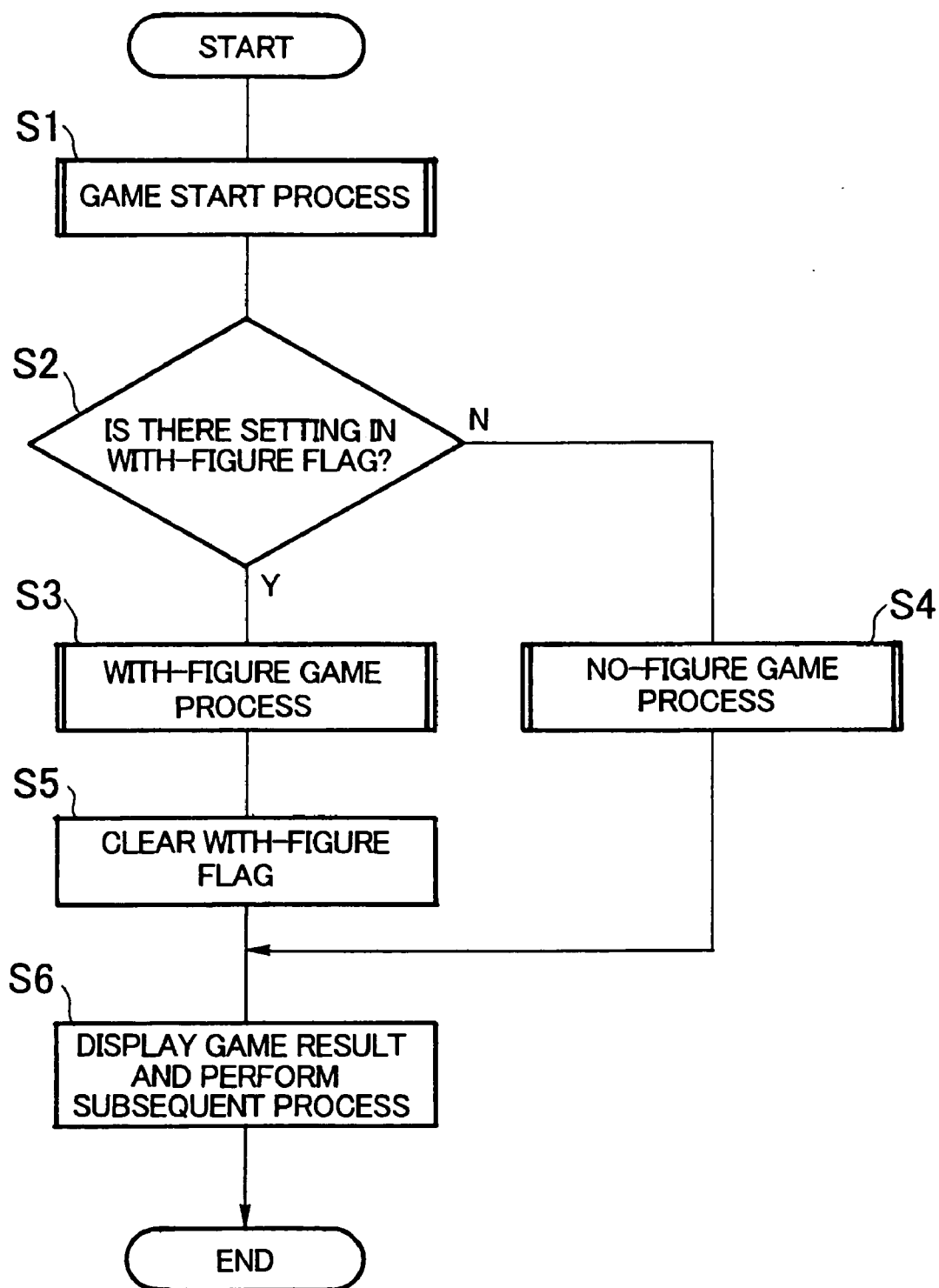


FIG. 12

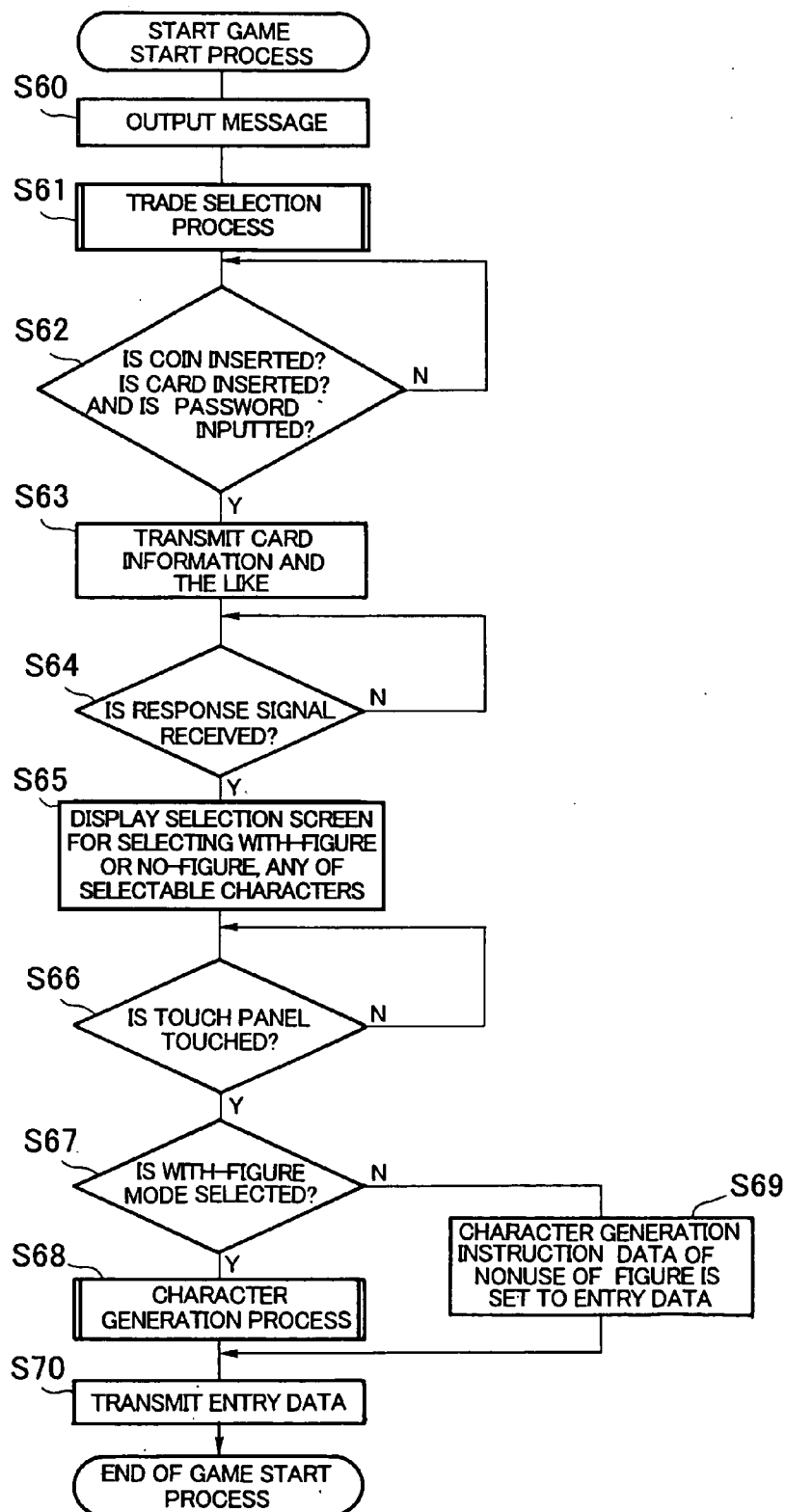


FIG. 13

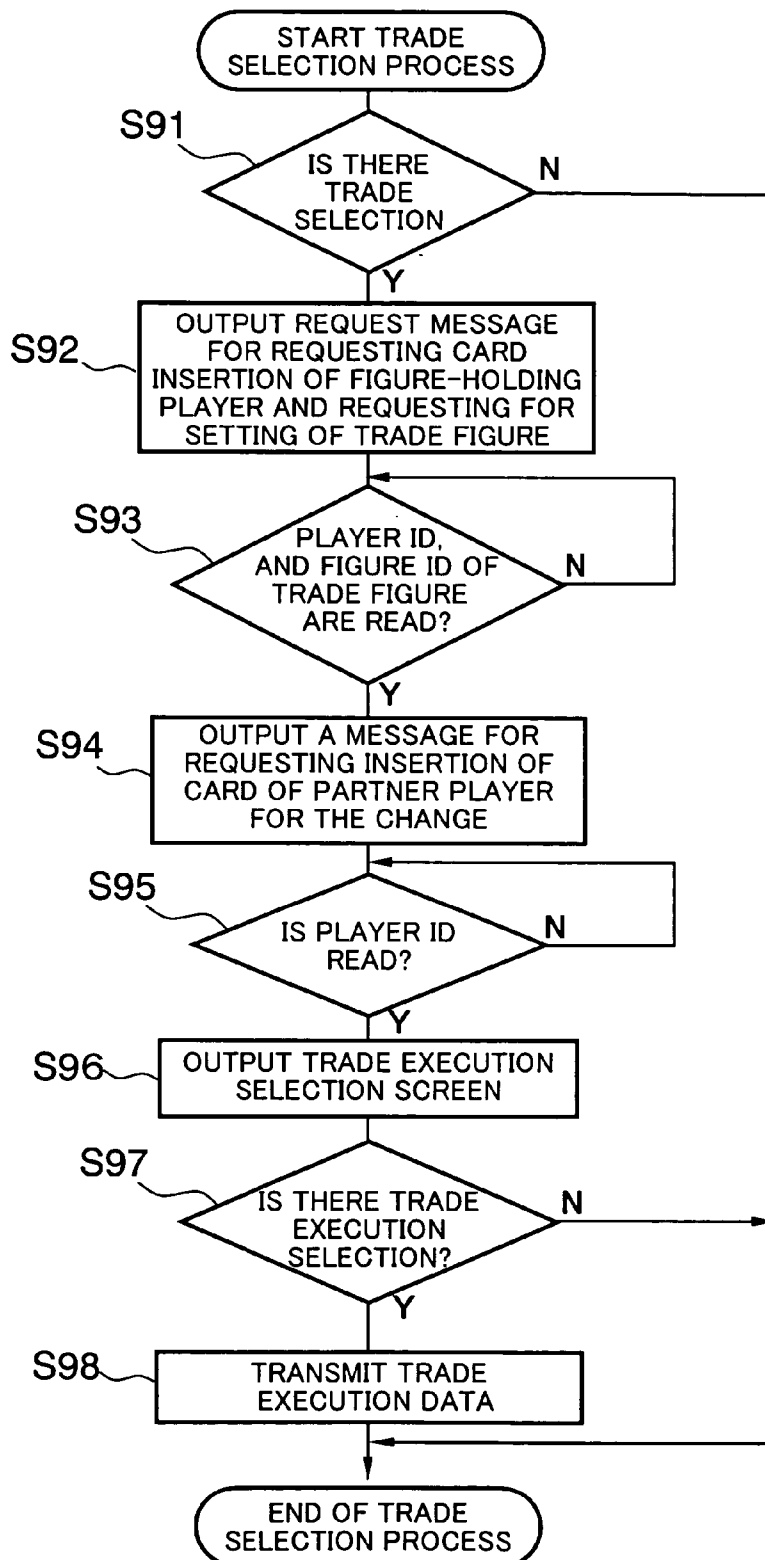


FIG. 14

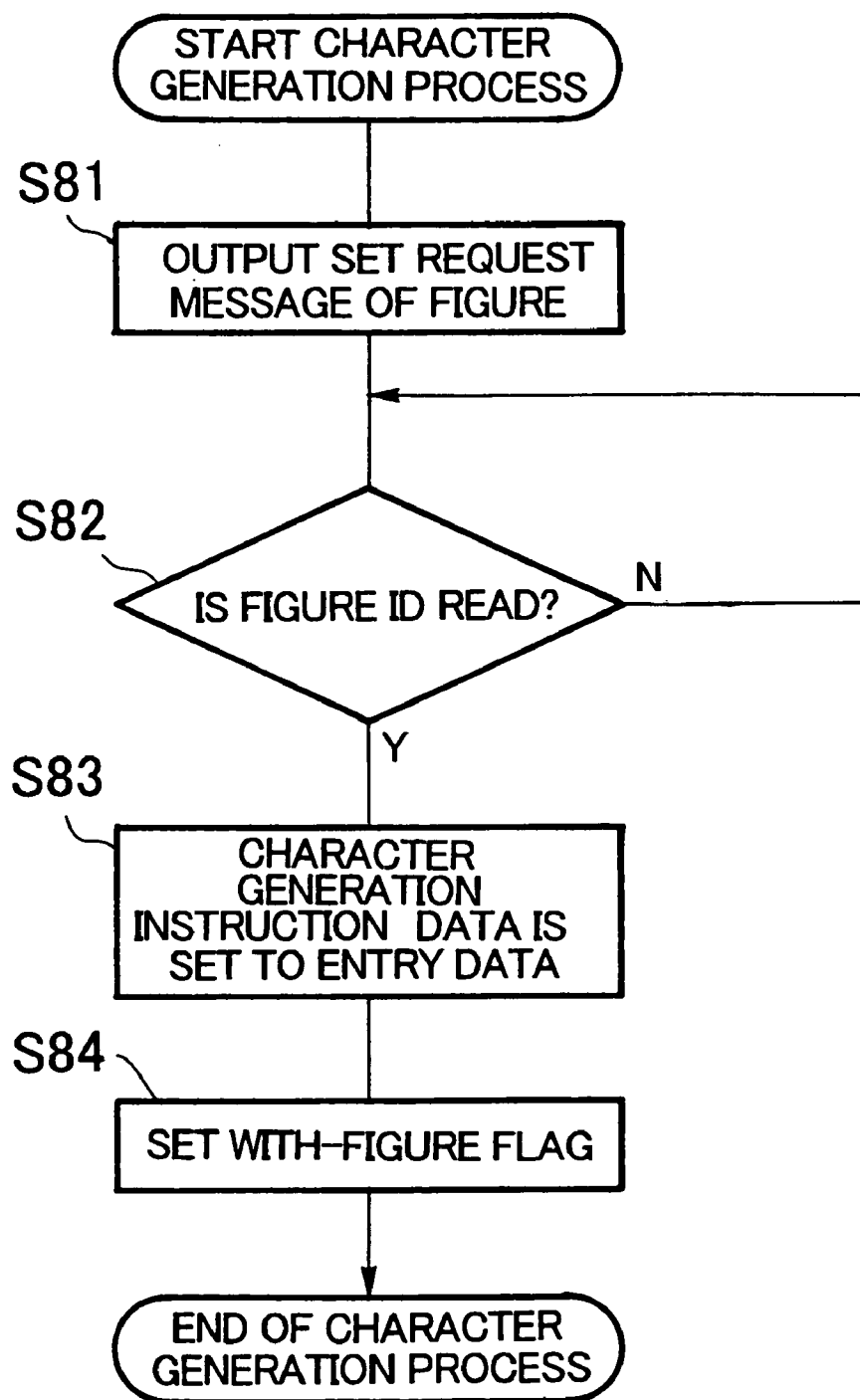


FIG. 15

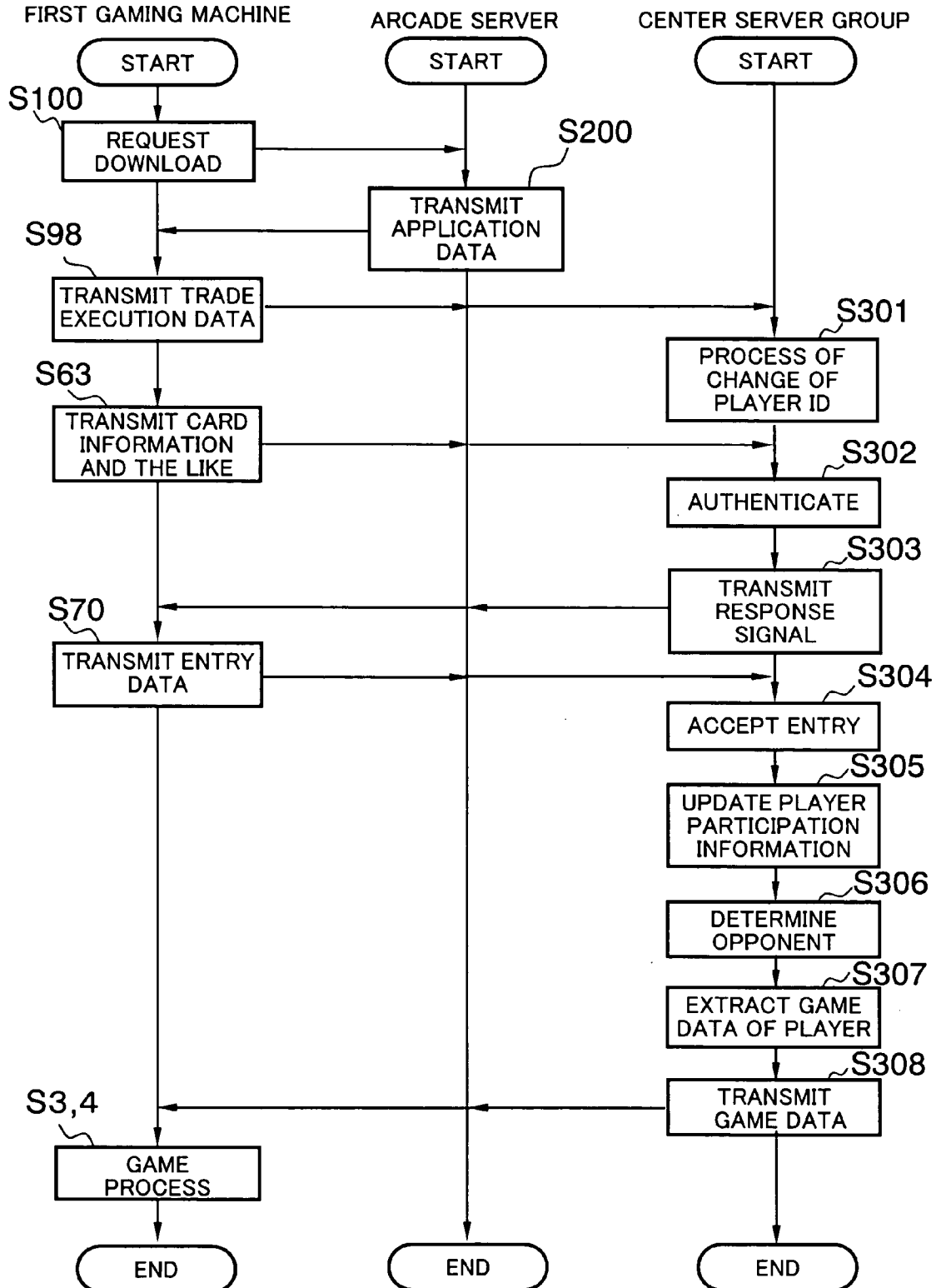


FIG. 16

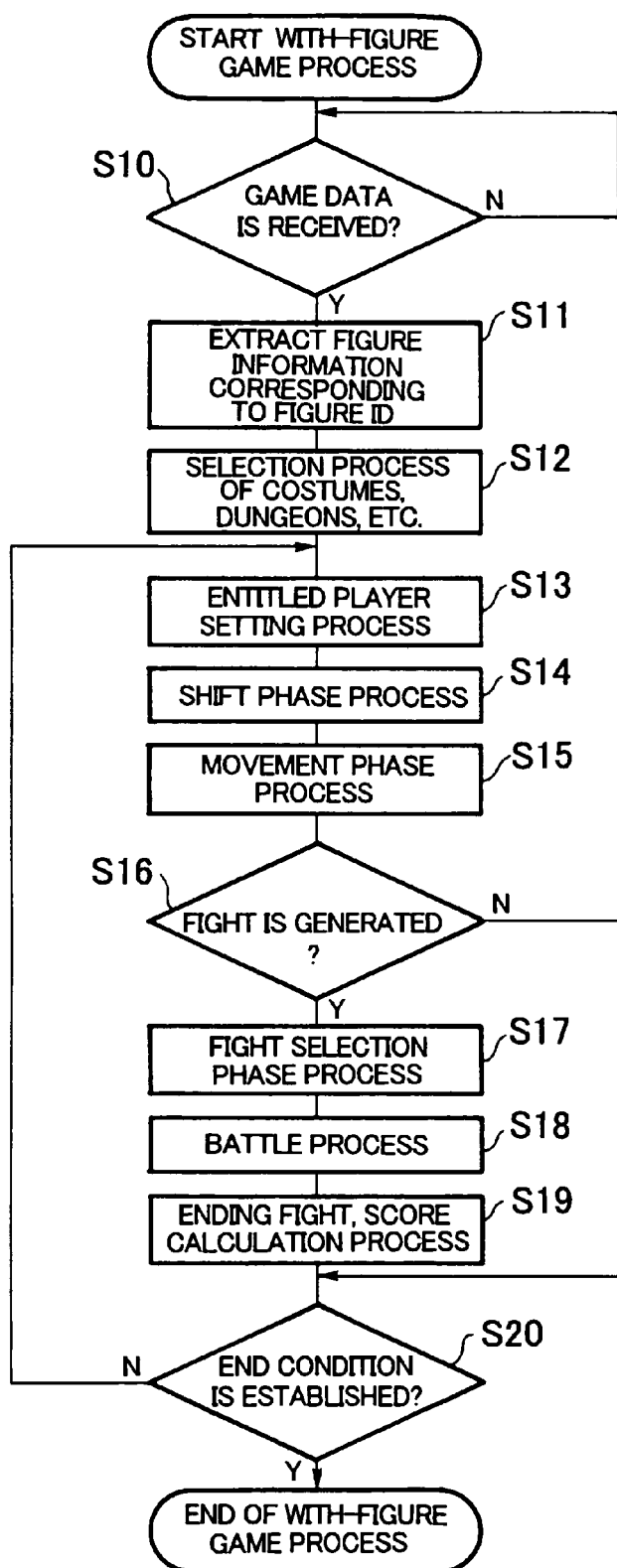


FIG. 17

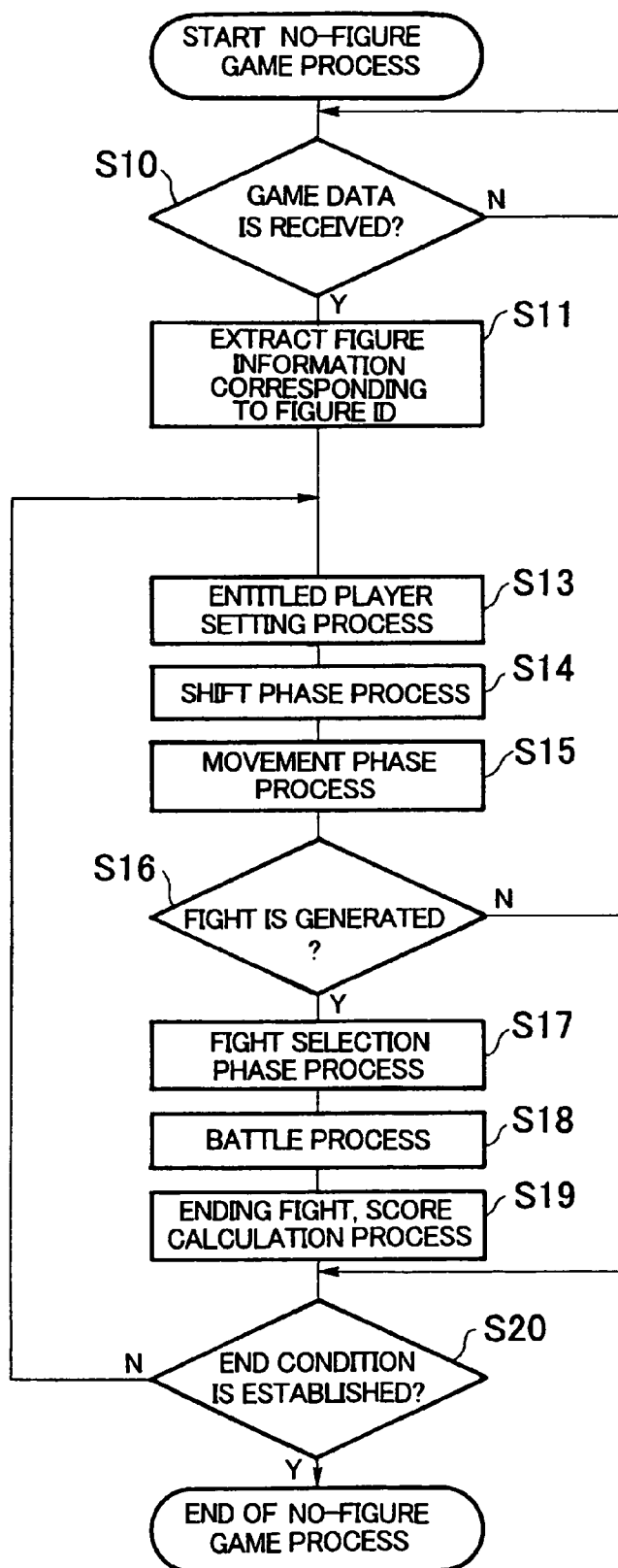


FIG. 18

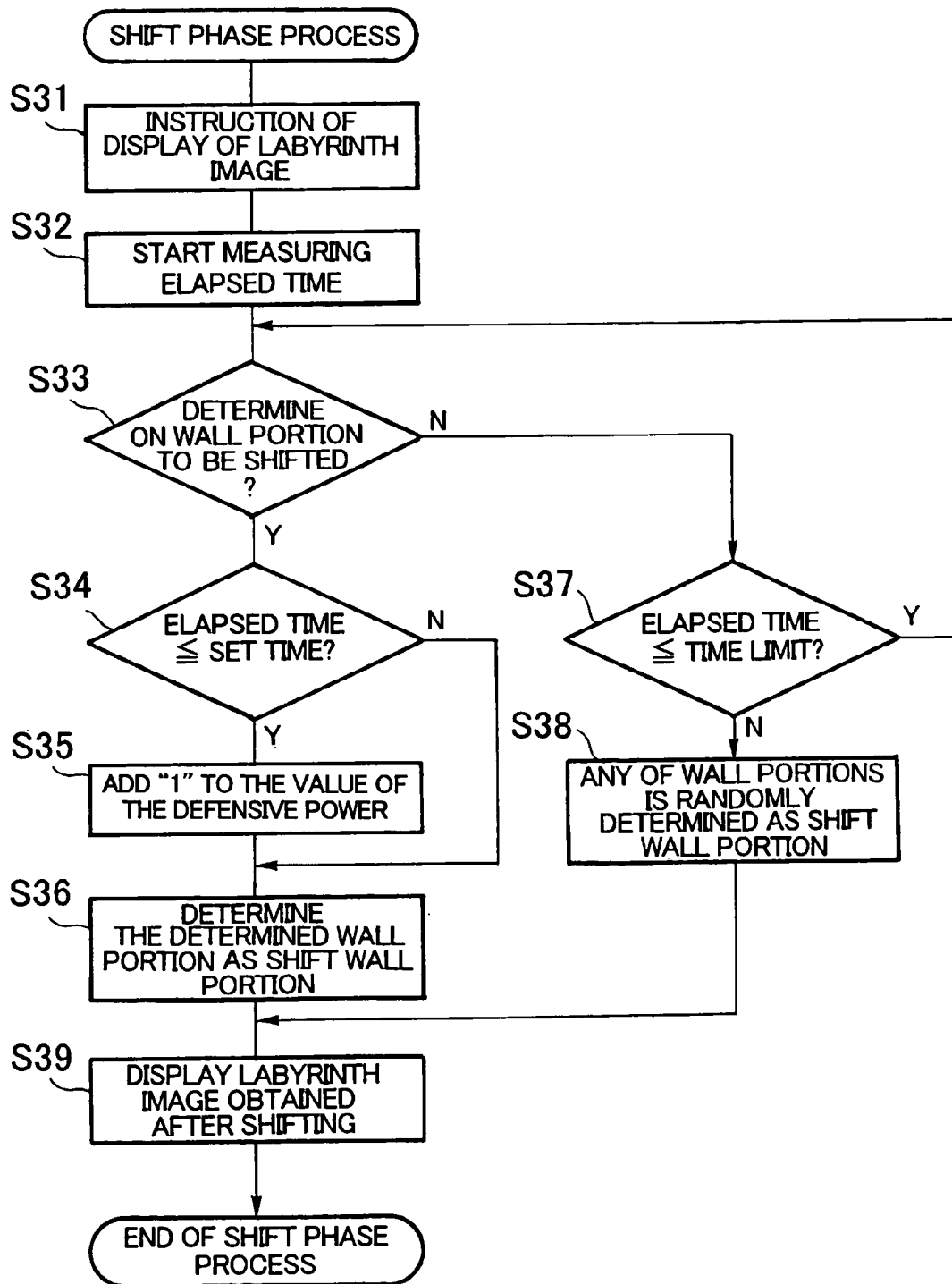


FIG. 19

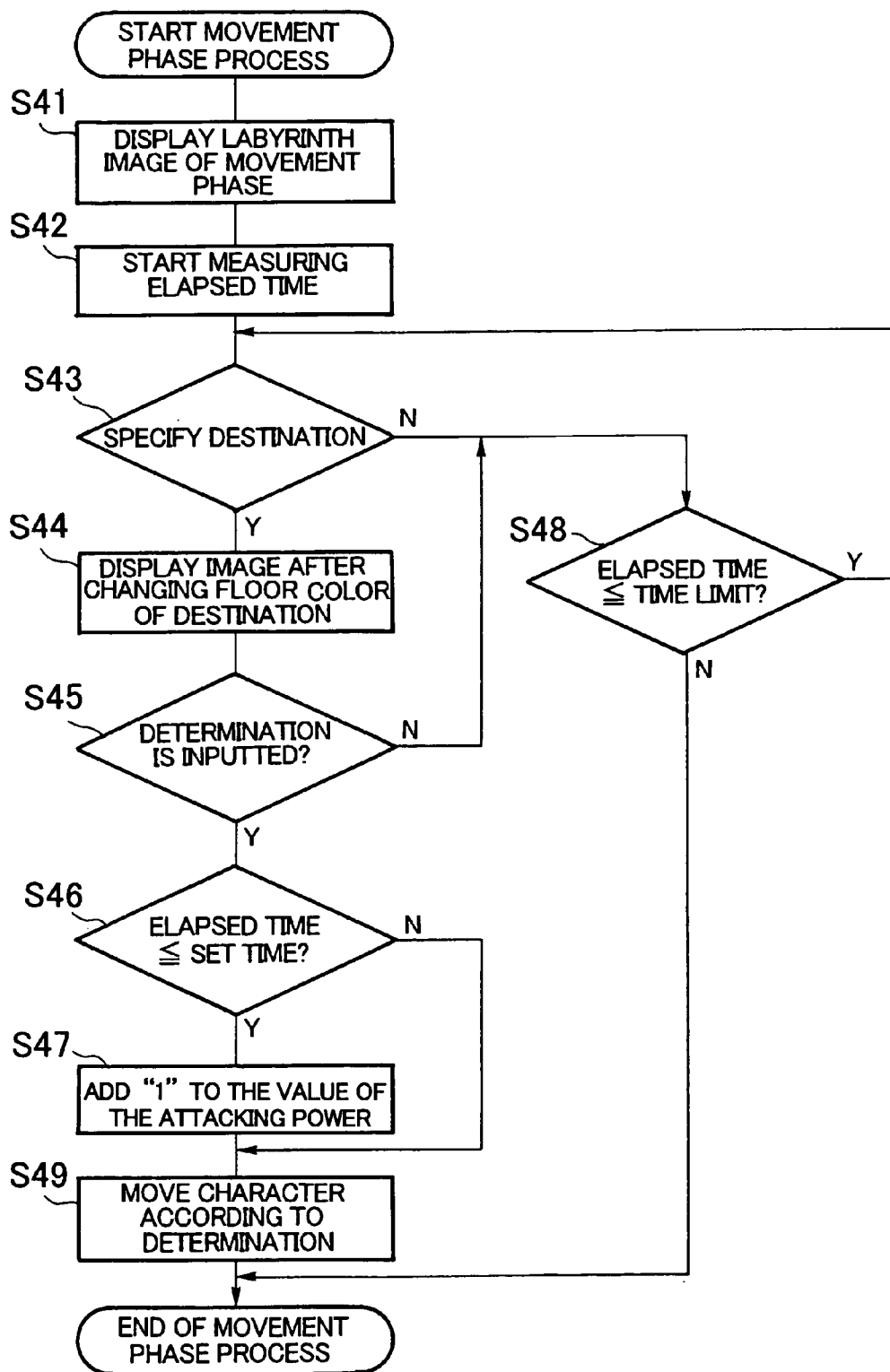


FIG. 20

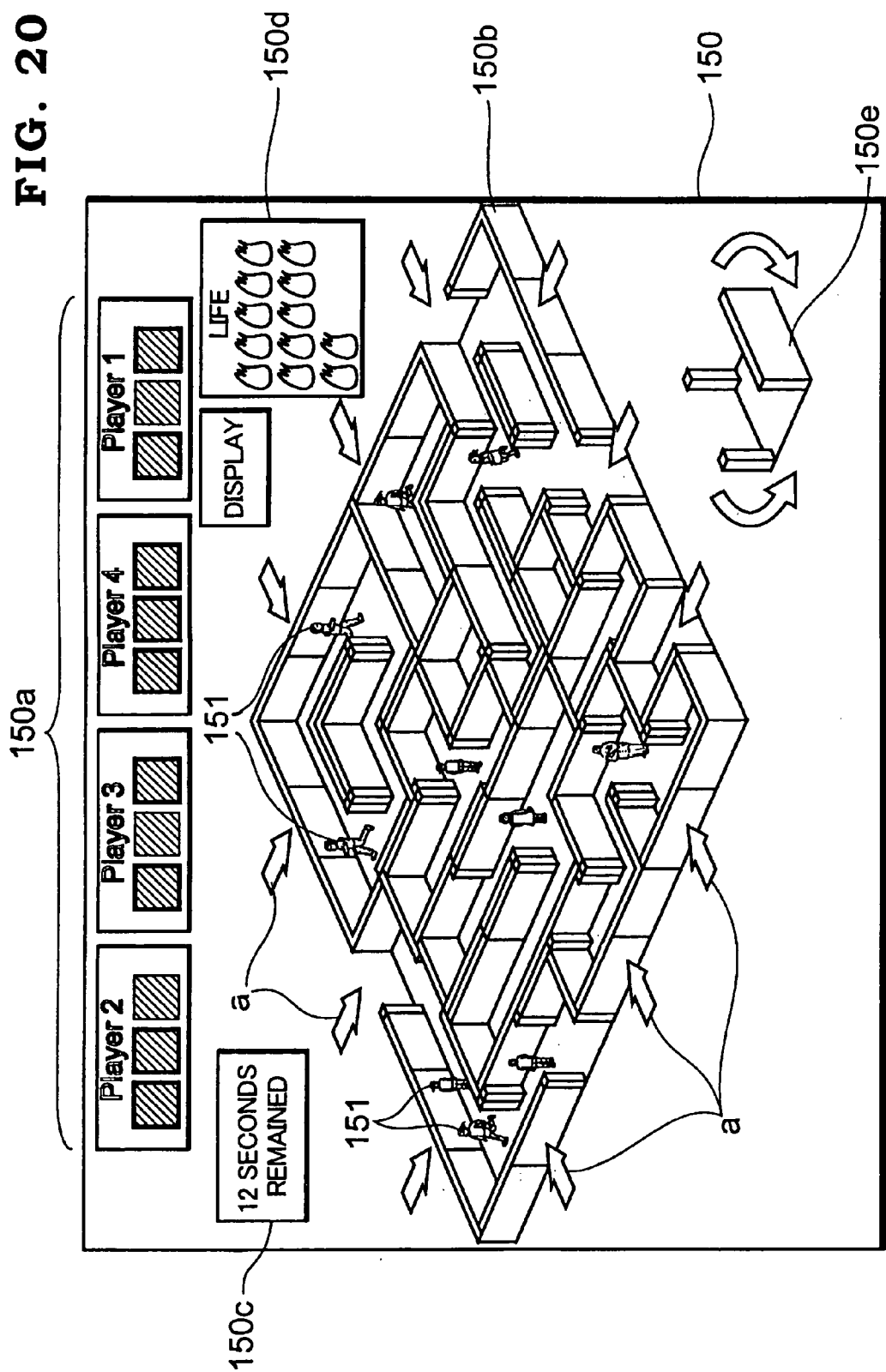


FIG. 21

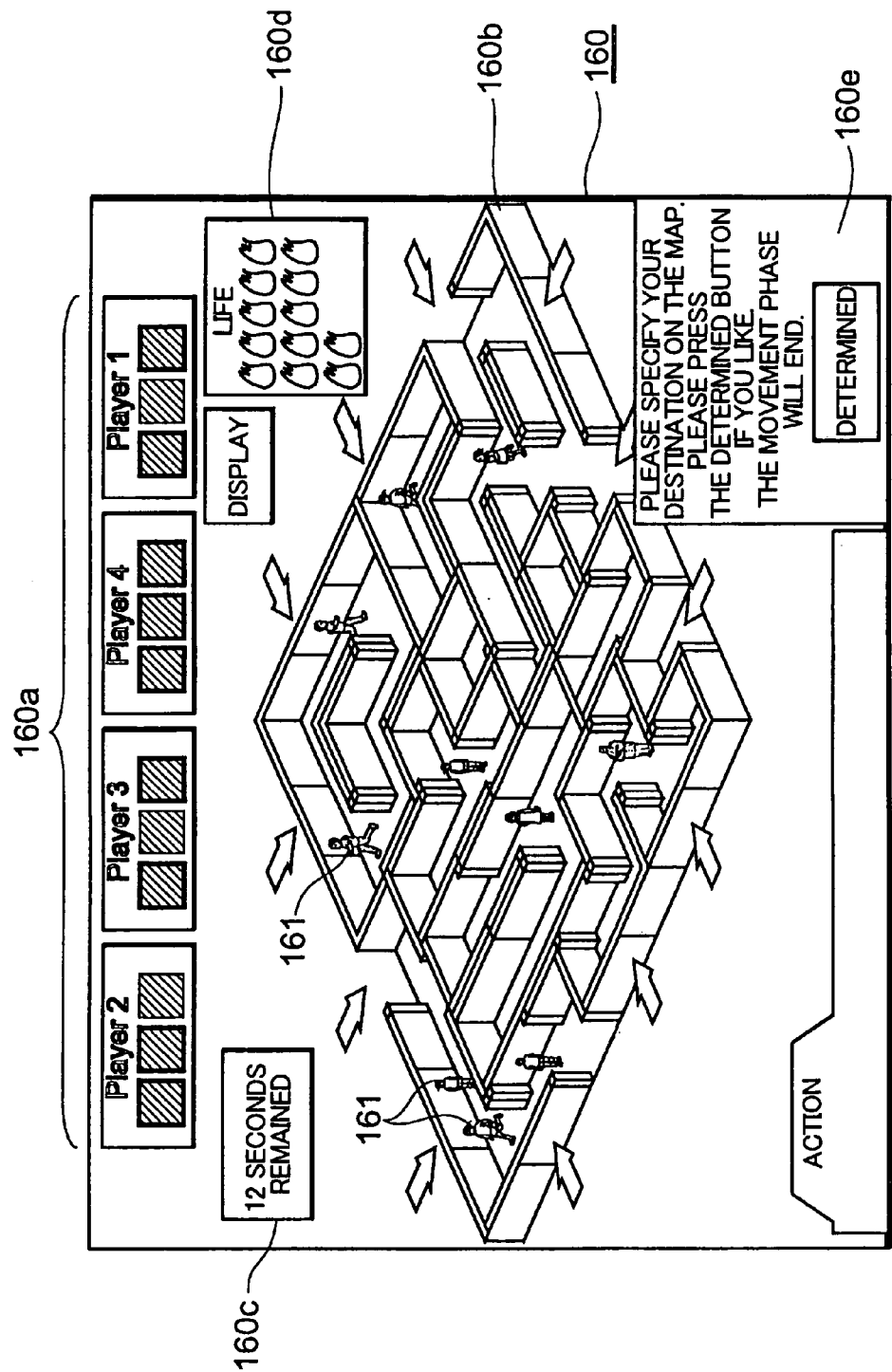


FIG. 22

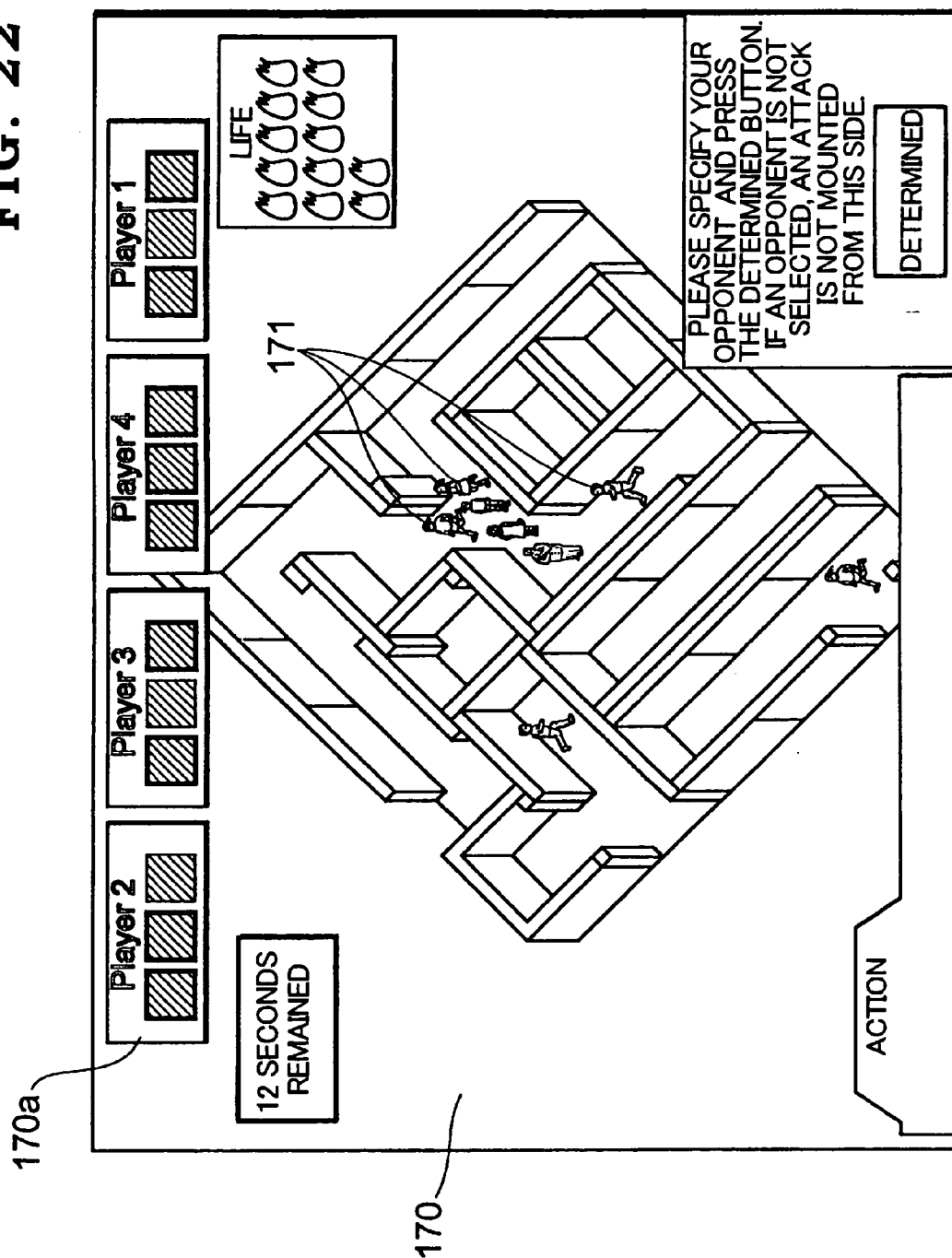
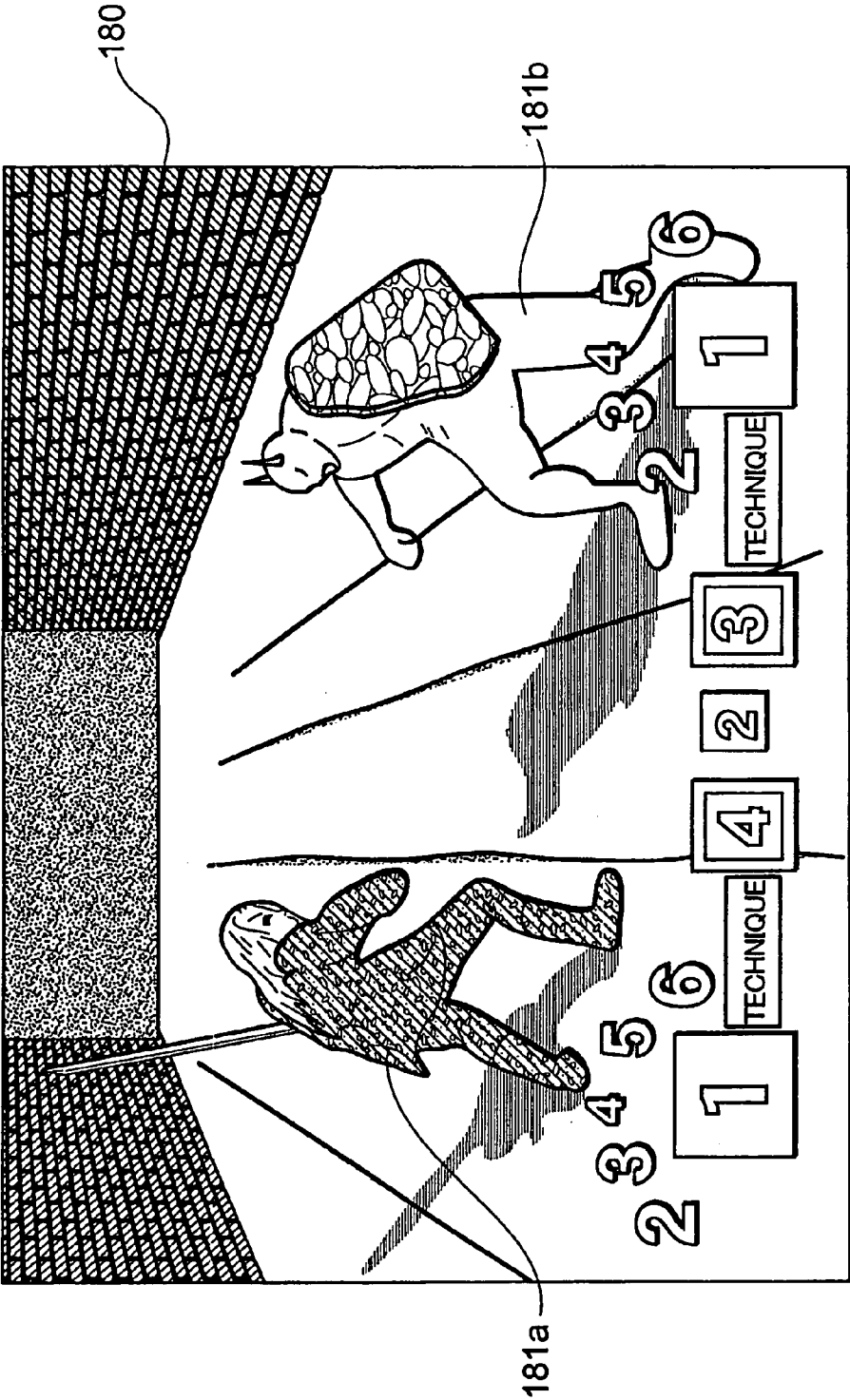


FIG. 23



GAMING SERVER AND GAMING SYSTEM

RELATED APPLICATIONS

[0001] This application claims the priority of Japanese Patent Application No. 2004-287721 filed on Sep. 30, 2004, which is incorporated by reference.

BACKGROUND OF THE INVENTION

[0002] 1. Field of the Invention

[0003] The present invention relates to a gaming server which is connected to a gaming machine on which can be played a game using an image of a gaming object which shows a figure or other object appearing in a game, and to a gaming system in which such a game can be played.

[0004] 2. Description of the Prior Art

[0005] There has been conventionally known a gaming machine on which can be played a game by recording the identification information on a character appearing in a game in an object to be read such as a card, and displaying a game image using the character corresponding to the identification information read from the card or the like (so called a "video gaming machine"). For example, Japanese Unexamined Patent Publication No. 2002-301264 discloses a card game device in which is executed a soccer game by recording personal data (identification information) of a soccer player in a card which displays the soccer player, recording data (figure information) indicating the skills and the like of the player in an IC chip which is different from the card, and reading the corresponding figure information from the IC chip using the personal data inside the card. In this card game device, various teams can be organized by combining a plurality of cards, and also the skills and the like of the players can be improved in the trainings or matches in a game.

[0006] Moreover, Japanese Unexamined Patent Publication No. 2003-251075 discloses an electronic game device in which a corresponding character appears in a game by storing the figure information in an IC incorporated in a trading card and reading the figure information from the IC. In this electronic game device, the figure information can be updated by the selection of a player in accordance with the growth of the character during a game.

[0007] However, in the card game device described above, the figure information is independent for each card, and is unable to be changed as long as the data in the IC chip is not updated. It is necessary to update the data in the IC up by carrying out the game contents (the training and the like) again and again in order to change the figure information, and this is a reason that a player gets tired of the game.

[0008] Further in the above device, if a third person other than a card owner plays a game, the figure information may be altered against the card owner's will. If the correspondence between a game player and the figure information is solidified in order to prevent the above circumstance, a person who receives the card cannot carry on the previous figure information, reducing the fascinating aspect of the card exchange and intentions of collecting the card.

SUMMARY OF THE INVENTION

[0009] The present invention is contrived to solve the above problems, and an object of the present invention is to

provide a player with the fascinating aspect of a game in which is used an image of a gaming object which shows a figure or other object appearing in a game, and also to provide a gaming server and gaming system in which the advantage of the player who can use the figure information and the like is carried on to other player, while preventing alteration of the figure information and the like.

[0010] For solution of the above problems, the present invention is a gaming server which is connected to a gaming machine on which a game is played which utilizes an image of a gaming object which shows a figure or other object appearing in a game, the gaming server comprising changing means for changing a correspondence between gaming object data indicating characteristics of each gaming object and player information for identifying a player utilizing the gaming object data in the game.

[0011] This gaming server can change the correspondence between the gaming object data and the player information for identifying a player who can utilize the gaming object data in the game.

[0012] Further, the present invention comprises storage means for storing the player information for identifying a player utilizing the gaming object data in the game in correspondence to the gaming object data, and the changing means may change the player information corresponding to the gaming object data stored in the storage means to other player information.

[0013] In this gaming server, the player information for identifying a player who can utilize the gaming object data in the game is related to the gaming object data and then stored, and the player information corresponding to the gaming object data can be changed to other player information.

[0014] Moreover, the present invention is a gaming system, which comprises a gaming machine on which a game is played which utilizes an image of a gaming object which shows a figure or other object appearing in a game, and a gaming server which is connected to the gaming machine, wherein the gaming server has changing means for changing the correspondence between gaming object data indicating characteristics of each gaming object and player information for identifying a player utilizing the gaming object data in the game.

[0015] The gaming system can change the correspondence between the gaming object data and the player information for identifying a player who can utilize the gaming object data in the game.

[0016] In the present invention, the gaming machine further comprises game progress control means for controlling the progress of the game in which is utilized the gaming object image corresponding to the gaming object data which is obtained after the correspondence is changed by the changing means.

[0017] This gaming system controls the progress of the game in which is utilized a gaming object image corresponding to the gaming object data obtained after the correspondence is changed by the changing means.

[0018] In the present invention, the gaming machine further comprises reading means for reading discrimination information corresponding to the gaming object from an

object to be read in which the discrimination information is stored, and player information reading means for reading the player information for identifying a player utilizing in the game the gaming object data showing the characteristics of each of the gaming objects, the gaming server further comprises storage means for storing the gaming object data in correspondence to the player information and discrimination information, and, among the gaming object data items stored in the storage means, regarding the gaming object data items corresponding to the discrimination information and player information which are read by the reading means and player information reading means, the changing means changes the player information corresponding to the gaming object data items to other player information.

[0019] In the gaming system, the corresponding player information is changed to other player information with respect to the gaming object data corresponding to the discrimination information and player information that are read by the reading means and the player information reading means.

[0020] The gaming system of the present invention further comprises an arcade server installed in a game arcade, a plurality of gaming machines connected communicably to the arcade server via dedicated lines, and an in-arcade router installed in the game arcade, wherein the arcade server is connected to the gaming server via the in-arcade router, communication lines and an Internet.

[0021] The gaming machine further comprises a correspondence change input means for performing input for selecting change of correspondence between the gaming object data and the player information, and wherein correspondence change information which is input from the correspondence change input means is transmitted to the gaming server.

[0022] In the present invention, the gaming server receives the correspondence change information, the changing means changes the player information corresponding to the gaming object data to other player information on the basis of the correspondence change information.

[0023] Further, in the gaming system of the present invention the player information may be stored in an ID card.

BRIEF DESCRIPTION OF THE DRAWINGS

[0024] **FIG. 1** is a system configuration diagram of a gaming system which is equipped with a plurality of gaming machines according to the present invention;

[0025] **FIG. 2** is a perspective view showing the plurality of gaming machines and a card machine;

[0026] **FIG. 3** is a perspective view showing the entire configuration of a gaming machine;

[0027] **FIG. 4** is a block diagram of the gaming machine, which mainly shows the internal configuration thereof;

[0028] **FIG. 5** is a block diagram showing an example of the internal configuration of an image control circuit;

[0029] **FIG. 6** is a block diagram showing an arcade server;

[0030] **FIG. 7** is a block diagram showing a game server and a database server;

[0031] **FIG. 8** is a diagram showing a figure management file;

[0032] **FIG. 9** is a diagram showing an example of the figure management file obtained after the processing of change of player ID is performed;

[0033] **FIG. 10** is an exploded perspective view showing a configuration of a figure;

[0034] **FIG. 11** is a flow chart showing an operation procedure of a game process from the start of the game to the end of the game in the gaming machine;

[0035] **FIG. 12** is a flow chart showing an operation procedure of a game start process;

[0036] **FIG. 13** is a flow chart showing an operation procedure of trade selection process.

[0037] **FIG. 14** is a flow chart showing an operation procedure of a character generation process;

[0038] **FIG. 15** is a sequence chart showing a sequence of an operation carried out among the first gaming machine, the arcade server and a center server group;

[0039] **FIG. 16** is a flow chart showing an operation procedure of a process in a with-figure game;

[0040] **FIG. 17** is a flow chart showing an operation procedure of a process in a no-figure game;

[0041] **FIG. 18** is a flow chart showing an operation procedure of a shift phase process;

[0042] **FIG. 19** is a flow chart showing an operation procedure of a movement phase process;

[0043] **FIG. 20** is a figure showing an image of a labyrinth;

[0044] **FIG. 21** is a figure showing another image of the labyrinth;

[0045] **FIG. 22** is figure showing a fight selection image; and

[0046] **FIG. 23** is a figure showing a battle image.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0047] Embodiments of the present invention are described hereinafter. It should be noted that the same reference characters are used to indicate the same elements, thus the overlapping explanations are omitted accordingly.

[0048] (The Entire Configuration of the Gaming System)

[0049] **FIG. 1** is a system configuration diagram of a gaming system **100** which is equipped with a plurality of gaming machines **1** according to the present invention, and **FIG. 2** is a perspective view showing the plurality of gaming machines **1** and a card machine **6**. The gaming system **100** is the same as the gaming system of the present invention, and has two game arcades A and B that are provided with one and two arcade servers **2** respectively, totaling three arcade servers, the plurality of gaming machines **1** (eight machines in the present embodiment) and card machines **6** connected communicably to the arcade servers via dedicated lines, an in-arcade router **7** provided in each of the game arcades A and B, and a center server group **5** connected to

the in-arcade routers 7 via communication lines 4a and the Internet 4. It should be noted that the center server group 5 has game servers 101 and 102, and a database server 103, and the data base server 103 is the same as the gaming server of the present invention in the present embodiment.

[0050] In each of the game arcades A and B, the arcade server 2 is connected to the gaming machines 1 and card machine 6 via dedicated lines 3 to form an in-arcade LAN (Local Area Network), which is then connected to the Internet 4 via the in-arcade router 7.

(Configuration of the Gaming Machine)

[0051] The gaming machine 1 is the same as the gaming machine of the present invention, and has image display means for displaying a gaming object image which shows a gaming object such as a play character moving in response to an operation of a player (the detail will be described later) or an arm character showing an arm item (for example, a bow and arrow, shield, and armor) used by the play character, thus the gaming machine is configured so as to play a game which allows the character to perform an action in response to an operation of the player or to use the arm item. The gaming machine 1 is designed such that a game can be played in which the character moves within a labyrinth while following the route selected by the player, battles another character (an operated character that performs the action according to a selection made by other player, or a unoperated character which is caused to perform the action by the gaming machine) to compete for the items that the characters have (a sacred gem which will be described later in the present embodiment), and defeats a character of the final target after collecting all of the items (hereinafter called "labyrinth battle game"). In this labyrinth battle game, the obtained scores of each character (called "life" in the present embodiment) are increased or decreased according to a battle result or the progress of the game, and the character that loses all the scores thereof becomes a loser.

[0052] The gaming machine 1 has a main display 11 equipped with a liquid crystal display at the front of a housing 10, as shown in FIG. 3. The gaming machine 1 further has a sub display 12, also equipped with a liquid crystal display in an upper portion of the main display 11, and both right and left sides of the sub display 12 are disposed with speakers 13L and 13R for outputting sound used for effects of a game.

[0053] The main display 11 is the image display means, and is designed to display a game image (for example, a labyrinth image 160 and the like) for each step in a game (the detail will be described later). The sub display 12 is designed to display an image (for example, a battle image 180 and the like, which will be described later) in a specified step of the game.

[0054] Also, the gaming machine 1 has an operation panel 14 on the lower side of the main display 11. The left side of the operation panel 14 is disposed with an authentication unit 15, and the right side of same is disposed with a coin insertion slot 16 for inserting a coin (a gaming medium such as hard currency, a medal, or the like) necessary for executing a game, and a card slot 18 for inserting an ID card 17. The operation panel also has an operation unit 19 which is equipped with an operation button and the like.

[0055] The authentication unit 15 is the same as the reading means in the present invention, and has a base

mounting portion 15a and a reading portion 15b fixed on the surface of the operation panel 14. This base mounting portion 15a has inside a thick disk-like recess corresponding to the shape of a base portion 41 in an after-mentioned FIG. 40 (see FIG. 10), and the base portion 41 can be fit and mounted in the recess. The reading portion 15b is disposed in the recess of the base mounting portion 15a, has an IC chip reader, which is not shown, and uses the IC chip reader to read out the recorded information from an IC chip 44 that is embedded in the base portion 41 of the mounted FIG. 40. It should be noted that the authentication unit 15 has an LED, and exposes the after-mentioned FIG. 40 to light during the read operation of the FIG. 40.

[0056] Each of the gaming machines 1 that configures the gaming system 100 is given a machine-specific machine ID. The machine ID has a server ID inherent in each of the arcade server 2, and an ID inherent in each of the gaming machines 1. For example, each of the gaming machines 1 installed in the arcade A has an ID of A01, A02, A03 etc.

[0057] FIG. 4 is a block diagram of the gaming machine 1, which mainly shows the internal configuration thereof. The gaming machine 1 has a plurality of components, with a microcomputer 31 as the center of the components.

[0058] The microcomputer 31 has a main CPU (Central Processing Unit) 32, RAM (Random Access Memory) 33 and ROM (Read Only Memory) 34. The main CPU 32 operating according to a program stored in the ROM 34 inputs a signal from each component provided in the operation panel 14 and at the same time performs input and output of the signal to and from other components by means of I/O port 39 to perform operation control of the entire gaming machine 1. Data or programs (application data or game data in the present embodiment, which will be described later) used when the main CPU 32 operates are stored in the RAM 33. A control program executed by the main CPU 32 and permanent data are stored in the ROM 34.

[0059] The gaming machine 1 further has a random number generator 35, a sampling circuit 36, a clock pulse generating circuit 37, and a frequency divider 38. The random number generator 35 operates according to an instruction from the main CPU 32 to generate a certain range of random numbers. The sampling circuit 36 extracts an arbitrary random number from the random numbers generated by the random number generator 35 according to the instruction from the main CPU 32, and inputs the extracted random number to the main CPU 32. The clock pulse generating circuit 37 generates a reference clock for operating the main CPU 32, and the frequency divider 38 inputs a signal, which is obtained by dividing the reference clock at a constant frequency, to the main CPU 32.

[0060] Moreover, the gaming machine 1 has a touch panel 11a, a coin sensor 16a, a card reader 18a, a communication control portion 21, a communication processing portion 22, an image control circuit 71, and a sound control circuit 72.

[0061] The touch panel 11a is the operating means, is provided so as to cover the display screen of the main display 11, detects a position of a spot that the player touched, and inputs a position signal corresponding to the detected position to the main CPU 32. The player uses the touch panel 11a to perform an operation input for determining a performance of the character. For example, in the touch

panel 11a, a conductive material is applied onto the surface of a rectangular transparent plate, and voltage is applied from the electrodes disposed on the four corners of the transparent plate, whereby a slight current change which is caused when a finger of the player touches to the plate is sensed by means of the electrodes, and the position of the spot that the player touched is detected.

[0062] The coin sensor 16a detects a coin inserted into the coin insertion slot 16, and outputs a detection signal corresponding to the detection to the main CPU 32. The card reader 18a reads out card information of a player ID or the like, which is recorded in the ID card 17 inserted into the card slot 18, and inputs the read card information to the main CPU 32. In the present embodiment the player ID is the same as the player information for identifying a player who can use the gaming object data in the game, and the card reader 18a is the same as the player information reading means.

[0063] The communication control portion 21 operates according to an instruction from the main CPU 32, and controls the connection or disconnection of a line used for a communication with the arcade server 2. The communication processing portion 22 operates according to an instruction from the communication control portion 21, and executes data transmission which is performed through the dedicated lines 3.

[0064] The image control circuit 71 controls an image display in the main display 11 and the sub display 12, and allows the main display 11 and the sub display 12 to display various images such as those showing characters.

[0065] The image control circuit 71 has an image control CPU 71a, a work RAM 71b, a program ROM 71c, an image ROM 71d, a video RAM 71e, and a VDP (Video Display Processor) 71f, as shown in FIG. 5. The image control CPU 71a determines images to be displayed by the main display 11 and the sub display 12 according to an image control program which is stored in the program ROM 71c beforehand (relates to display on the main display 11 and the sub display 12), based on a parameter set by the microcomputer 31. The work RAM 71b is configured as temporary storage means for when the image control CPU 71a executes the image control program.

[0066] The program ROM 71c has stored therein the image control program, various selection tables or the like. The image ROM 71d has stored therein dot data for forming images. The video RAM 71e is configured as temporary storage means for when forming images by means of the VDP 71f. The VDP 71f has a control RAM 71g, forms images corresponding to the contents displayed by the main display 11 and the sub display 12 which are determined by the image control CPU 71a, and outputs each of the formed images to the main display 11 and the sub display 12.

[0067] The sound control circuit 72 inputs a sound signal for outputting a sound from the speakers 13L and 13R, to the speakers 13L and 13R. Sounds for bringing an excitement to a game at an appropriate time is outputted from the speakers 13L and 13R after, for example, the start of a game.

(Configurations of the Arcade Server, Card Machine, and In-Arcade Router)

[0068] As shown in FIG. 6, the arcade server 2 has a CPU 201, ROM 202, RAM 203, communication processing por-

tion 204, communication control portion 205 and data storage portion 206 which has stored therein application data. The CPU 201 operates while reading and writing the data into and from the RAM 203 according to the programs stored in the ROM 202, and at the same time the communication control portion 205 activates the communication processing portion 204 according to an instruction from the CPU 201. The arcade server 2 performs data transmission with each of the gaming machines 1 set in each of the game arcades A and B via the dedicated lines 3 to transmit (download) the application data to each of the gaming machines 1, or relays the data transmission between the gaming machines 1 and with the center server group 5. The application data include various data used in execution of a labyrinth battle game carried out in the gaming machine 1 (image data for games, and the like), and data for boards (a program for settings for relating the operation buttons equipped in the operation unit 19 to the labyrinth battle game).

[0069] The card machine 6 has an operation portion for the player to perform an input operation of the personal information, and card issuing means, wherein the card issuing means allows storage of the card information containing the player ID (the player information) inherent in the player, and issues the ID card 17 by means of a predetermined input operation using the operation portion.

[0070] The in-arcade router 7 connects an in-arcade LAN, which is formed in each of the game arcades A and B, to a LAN formed in the center server group 5, via the communication lines 4a and the Internet 4.

(Configuration of the Center Server Group)

[0071] The center server group 5 has a plurality of game servers (two game servers 101 and 102 in FIG. 1) that are installed for each game, and a database server 103, wherein the game servers are connected to each other via dedicated lines 104 to form a LAN, which is connected to the Internet 4 via an unshown router.

[0072] The game server 101 is installed in order to execute the labyrinth battle game, and, as shown in FIG. 7, has a CPU 301, ROM 302, RAM 303, communication processing portion 304, communication control portion 305, and data storage portion 306. In the game server 101, the CPU 301 operates while reading and writing the data into and from the RAM 303 according to the programs stored in the ROM 302, and at the same time the communication control portion 305 activates the communication processing portion 304 according to an instruction from the CPU 301.

[0073] The game server 101 performs data transmission with each of the arcade servers 2 via the Internet 4. Then the game server 101 receives after-mentioned entry data which is transmitted from each of the gaming machines 1, updates acceptance of participation (entry) of a player to a labyrinth battle game and also participation information of the player, determines a player as an opponent, and transmits a result obtained to the database server 103.

[0074] The game server 102 is installed for executing another game, and has the same configuration as the game server 101, although the data or programs stored therein are different from the game server 101.

[0075] The database server 103 is the gaming server in the present invention, and has a CPU 401, ROM 402, RAM 403,

communication processing portion 404, communication control portion 405, and data storage portion 406. In the database server 103, the CPU 401 operates while reading and writing the data into and from the RAM 403 according to the programs stored in the ROM 402, and at the same time the communication control portion 405 activates the communication processing portion 404 according to an instruction from the CPU 401, and performs data transmission with each of the arcade servers 2 via the Internet 4. The data storage portion 406 has stored therein the game data, the player ID, a password used for authenticating the player and the type of a game.

[0076] The game data includes character-specific data which indicates the characteristics of each character (information indicating a costume for each character, costume color, survival power, magical power, attacking power, defensive power against a physical attack, magical attacking power, magical defensive power, a character ability value having an attack range, a special ability, an item with which the character is armed, effects that the item has and the like. Such information is referred to as “figure information” hereinafter), and data indicating a history of a labyrinth battle game played by each player. This game data is transmitted from the database server 103 to the gaming machine 1 and is used in a labyrinth battle game. It should be noted that the figure information described above is the same as the gaming object data in the present invention.

[0077] The player ID is read from the ID card 17 and transmitted from the gaming machine 1. As is described hereinafter, in the gaming machine 1 each player sets a figure for game 40 in the authentication unit 15, the figure being used by the player, and allows the figure ID to be read, whereby the read figure ID corresponding to the figure for game 40 is transmitted from the gaming machine 1 to the database server 103. In the database server 103, a figure management file 60, which relates a plurality of corresponding figure IDs to one player ID transmitted from the gaming machine 1 and can store the obtained IDs, is formed in the data storage portion 406. Moreover, the player ID and figure ID are related to the figure information of each character corresponding to the player ID and figure ID, and these related IDs and information are stored in the figure management file 60. Each character has characteristics based on the figure information, so even if the same characters appear in an image, their abilities are different according to the figure information, and its characteristic is different from each other. Only a corresponding player (player ID) obtained from the figure management file 60 can play the labyrinth battle game using a unique character which uses the figure information. It should be noted that in the present embodiment the data storage portion 406 in which the figure management file 60 is formed is the same as the storage means of the present invention.

[0078] FIG. 8 shows the figure management file 60, in which are shown a record 61 where the player ID corresponds to “0001” and figure ID corresponds to “1000”, and a record 62 where the player ID corresponds to “0012” and figure ID corresponds to “1101”. Furthermore, the figure management file 60 has an ID management area 60A and a character management area 60B, where a player ID 60a and a figure ID 60b are set in the ID management area 60A. Moreover, there are set in the character management area 60B the items which configure the figure information unique

to each character, such a figure type 60c, survival power 60d, magical power 60e, attacking power 60f, defensive power against a physical attack 60g, magical attacking power 60h, and magical defensive power 60i.

[0079] The player ID 60a and figure ID 60b are the items as indexes for each of the records stored in the figure management file 60, and four digit numbers corresponding to the player IDs or figure IDs are stored. The figure type 60c is an item which indicates an attribute of the figure, and classified broadly into “player” and “item”. “Player” shown in FIG. 8 means a figure corresponding to a player character which performs an action in response to an operation of the player, and “item” (not shown) means a figure corresponding to an arm character. On the other hand, the items such as the survival power 60d, magical power 60e and the like express the abilities of the character numerically, and the large and small numerical values correspond to the high and low abilities. Further, although not illustrated in the figures, other items that configure the figure information such as the costumes of the characters or the colors of the costumes are also related to the player IDs or figure IDs, and stored.

[0080] It should be noted that FIG. 9 shows the figure management file 60 obtained after the processing of change of player ID is performed. The processing of change of player ID is described in detail hereinafter.

(Configuration of the Figure)

[0081] FIG. 10 is an exploded perspective view showing a configuration of the FIG. 40. The FIG. 40 has the base portion 41, and a figure main body portion 42 representing a three-dimensional shape of each figure appearing in the labyrinth battle game.

[0082] The base portion 41 has a size of the recess formed in the base mounting portion 15a, and is formed into a hollow thick disk-like shape. The base portion 41 has a base main body portion 43 having a top portion 43a, the base main body portion being in the form of a cylinder with a bottom, and the IC chip 44, wherein the IC chip 44 is embedded and fixed into an opening end portion of the base main body portion 43. Further, the base portion 41 has a protruding portion 43b in substantially a center of the top portion 43a of the base main body portion 43. The IC chip 44 has stored therein a figure ID inherent in a character corresponding to the figure main body portion 42. It should be noted that in the present embodiment the figure ID is the same as the discrimination information corresponding to the gaming object of the present invention.

[0083] The figure main body portion 42 has a leveling pad portion 46 having a concave portion 46a corresponding to the protruding portion 43b, and a doll portion 47 which is formed such that it stands on two legs on the leveling pad portion 46, and models the character appearing in the labyrinth battle game, wherein the protruding portion 43b is embedded in the concave portion 46a so that the figure main body 42 is fixed to the top portion 43a of the base portion 41. It should be noted that the FIG. 40 is placed in a capsule with a diameter of approximately 7 cm which is not shown, and is sold in the same machine as the card machine 6. Monster figures are placed in a few capsules, thus, when using the FIG. 40 (with-figure mode, which is described hereinafter), sometimes the monster figures can be used. Moreover, even with the same figure, by making its color

different or changing the figure information, which is described hereinafter, the characteristic property of the character can be expressed to motivate the player's intentions of collection.

[0084] **FIG. 40** can be identified by the player according to the shape of the figure main body portion **42**, and also can be identified by the gaming machine **1** in accordance with the figure ID. The figure ID is unique to a different **FIG. 40**, and thus is designed so that multiple registration of the same figure in the gaming system **100** is prohibited.

(Operation Contents of the Gaming Machine)

[0085] Next, the details of the operation of the gaming machine **1** having the above-described configuration are described with reference to the flow charts shown in **FIG. 11** through **FIG. 19**. It should be noted that the explanation below is provided by taking a case as an example in which, of eight gaming machines **1** installed in the game arcade **A**, four gaming machines **1** are operated by the players respectively to play the same labyrinth battle game.

[0086] **FIG. 11** is a flow chart showing an operation procedure of a game process from the start to the end of the game in the gaming machine **1**. It should be noted that steps are abbreviated to **S** in **FIG. 11** and after-mentioned **FIG. 12** through **FIG. 19**. In the description below, one of the gaming machines **1** operated by the four players is taken as an example.

[0087] The gaming machine **1** transmits a download request of application data to the arcade server **2** when the power is turned on (step **100**, which will be describe later), and at the same time when the arcade server **2** receives the download request, the application data is transmitted to the gaming machine **1** which sent the download request (see **FIG. 15**).

[0088] Once receiving the application data, the gaming machine **1** stores the application data in the RAM **33**. Then, once the main CPU **32** reads the application data, in the gaming machine **1** the main CPU **32** proceeds with the labyrinth battle game according to operation input of the player. Each of the gaming machines **1** causes the main display **11** to display a game image while synchronizing with other gaming machines via the arcade server **2** and the center server group **5**. It should be noted in the present embodiment that the main CPU **32** operates as the game progress control means in the present invention to control the progress of the labyrinth battle game which is used a character image corresponding to the figure information obtained by changing the correspondence between the figure information and the player ID by the processing of change of player ID, which is described hereinafter.

[0089] When a game process is started, each gaming machine **1** proceeds to a step **1** to perform an after-mentioned game start process, which includes coin insertion, ID card insertion, password input, trade selection process, and character generation process. In a step **2**, it is determined whether or not predetermined data is set (setting is present) to a with-figure flag, which is described hereinafter, based on a result of the game start process. The processing is divided into a step **3** and **4** according to a result from this determination (step **3** in the case of a setting in the with-figure flag, and step **4** in the case of no setting). Either one of the processes is carried out, and when the with-figure flag is

cleared in a step **5** which follows the step **3**, the processing is proceeded to a step **6**, in which a game result (battle result) such as the scores is displayed, whereas the game data is updated in the database server **103**. Thus a subsequent process is performed for transmitting the data showing the battle result to the database server **103** via the arcade server **2**, and then the process is ended.

[0090] In this manner, in the gaming machine **1** the labyrinth battle game can be played in either the with-figure mode or no-figure mode. With the with-figure mode, however, the content of the game is more beneficial for the players than that of the no-figure mode (the details will be described later).

(Game Start Process)

[0091] The game start process of the step **1** is carried out by following the flow chart shown in **FIG. 12**. **FIG. 12** is a flow chart showing an operation procedure of a game start process, **FIG. 13** is a flow chart showing an operation procedure of a trade selection process, and **FIG. 14** is a flow chart showing an operation procedure of a character generation process.

[0092] The main CPU **32** proceeds to a step **60** once starting the game start process, to perform a message output process, instruct the image control circuit **71**, and cause the main display **11** to display a predetermined message (request for coin insertion, request for ID card insertion, and request for password input). Moreover, the main CPU **32** displays, along with this message, a selection screen for deciding whether or not to wish to trade (change of player ID corresponding to the figure information), and then proceeds to the trade selection process of a step **61**.

[0093] Once proceeding to the trade selection process of the step **61**, the main CPU **32** follows the flow chart shown in **FIG. 13** to perform the trade selection process. In the trade selection process, for example, along with the exchange of the **FIG. 40** performed by the players, regarding the character specific figure information corresponding to the player ID and figure ID, the character specific information being managed in the database server **103**, the player is allowed to select whether or not to change the player ID corresponding to the figure information to the player ID of the exchange partner. If the player wishes to change, the data for performing a changing process (trade execution data) is transmitted to the database server **103**. Hereinafter the explanation for the trade selection process is provided in association with an action of the player, with an example of the case where the players exchange the figures one-on-one.

[0094] In the trade selection process, the main CPU **32** proceeds to a step **91** to determine whether or not "wish to trade" is selected on a trade selection screen displayed on the main display **11**. If the "wish to trade" is selected, the processing proceeds to a step **92** where the trade selection process is ended when "trade is unnecessary" is selected.

[0095] Here, the player (first player) who wishes to exchange the **FIG. 40** negotiates with other player (second player) who wishes for figure exchange, and if the negotiation is settled, the first player touches the touch panel **11a** on the trade selection screen displayed on the main display **11** of the gaming machine **1** to select "wish to trade". It should be noted that the gaming machine **1** in which the first player

selects “wish to trade” is referred to as a “first gaming machine 1” in the explanation below.

[0096] In the step 92 the main CPU 32 instructs the image control circuit 71 and causes the main display 11 to output a request message for requesting card insertion of a figure-holding player and requesting for setting of the trade figure, and proceeds to a step 93 to wait until reading of the player ID and figure ID is ended. Here the first player inserts his ID card 17 into the card slot 18 and sets the FIG. 40 to be exchanged in the authentication unit 15. The player ID and figure ID which are read in this step are set as retrieval keys when retrieving a record corresponding to the figure management file 60. It should be noted that a sensor (not shown) for detecting the set state of the FIG. 40 is provided in the authentication unit 15. When this sensor detects that the FIG. 40 is removed from the authentication unit 15 before reading of the player ID of an after-mentioned partner player for the change is ended, the main CPU 32 ends the trade selection process.

[0097] When reading of the player ID and figure ID is ended, the processing proceeds to a step 94 where the main CPU 32 instructs the image control circuit 71 and causes the main display 11 to output a request message for requesting insertion of a card of the partner player for the change, and, in a following step 95, waits until reading of the player ID of the player who is the target of change is ended. Here, the second player who is a negotiating partner inserts his ID card 17 into the card slot 18 to allow the player ID to be read.

[0098] Once the reading of the player ID in the step 95 is ended, the processing proceeds to a step 96 where the main CPU 32 instructs the image control circuit 71 and causes the main display 11 to output a trade execution selection screen. In a following step 97 it is determined whether or not trade execution is desired. When the player selects “trade execution”, the processing proceeds to a step 98. When trade execution is not desired, the trade selection process is ended. Here the first player and the second player performs final confirmation on whether or not to cause the database server 103 to perform the process of change of player ID, and when they cause the database server to perform, “trade execution” is selected.

[0099] In the subsequent step 98 the main CPU 32 instructs the communication control portion 21 to operate the communication processing portion 22, and transmits the trade execution data having the player ID and figure ID of the first player, and the player ID of the second player to the database server 103 via the arcade server 2. When the process of trade execution data transmission is executed, the trade selection process is ended, and the processing proceeds to the subsequent step 62 (see FIG. 12).

[0100] It should be noted that the above-described processes of the steps 91 through 98 are carried out in other gaming machine 1 (referred to as a “second gaming machine 1” hereinafter) on the second player side. Specifically, in the second gaming machine 1 the second player as the figure-holding player selects “wish to trade”, inserts his ID card into the card slot 18, sets the FIG. 40 that the player wishes to exchange (the figure that the second player holds) in the authentication unit 15, and allows the player ID and figure ID to be read. Thereafter, the first player as the partner player for the change inserts his ID card into the card slot 18 of the second gaming machine 1, allows the player ID to be read,

and selects “trade execution” with mutual agreement reached between the both players. The second gaming machine 1 also transmits the trade execution data to the database server 103.

[0101] After the trade selection process is ended, a player, in order to start a game, inserts a coin into the coin insertion slot 6, inserts the ID card 17 into the card slot 18, and uses the operation unit 19 to input a password (FIG. 12). Then, a signal from detecting the coin that is inserted is inputted from the coin sensor 16a to the main CPU 32, and the card information stored in the ID card 17 is inputted from the card reader 18a. Furthermore, the password is inputted from the operation unit 19, and when all of these input are performed, the processing proceeds to the step 63, in which the main CPU 32 instructs the communication control portion 21 to operate the communication processing portion 22, and the card information that is read and the inputted password are transmitted to the arcade server 2.

[0102] In a subsequent step 64, the main CPU waits until the after-mentioned response signal is received from the center server group 5, and when the response signal is received the processing proceeds to a step 65. In the step 65 an instruction is given to cause the main display 11 to display a selection screen for selecting with-figure mode or no-figure mode, and any of the various selectable characters after it is discriminated whether or not authentication (registration) is completed in accordance with the response signal. In a step 66 the main CPU waits until the touch panel 11a is touched, and if it is touched the processing proceeds to a step 67, in which it is determined whether the with-figure mode is selected or not in step 65. When the with-figure mode is selected in this step, the processing proceeds to a step 68, and if not, the processing proceeds to a step 69. When the processing proceeds to the step 68, the after-mentioned character generation process is performed. In the step 69, data for character generation instruction (non-figure character generation instruction) due to nonuse of the figure is set to the after-mentioned entry data, and the processing proceeds to a step 70. Specifically, in the step 67, if the player selects the with-figure mode when using a figure for the first time and also when there is an authenticated figure and another figure that is different from the authenticated figure is used, the processing proceeds to a step 68, in which the character generation process is performed. Further, when the player does not use a figure and when the player does not use an authenticated figure although there is one, if the player selects the no-figure mode, the processing proceeds to the step 69.

[0103] When the processing proceeds to the step 68, the main CPU 32 performs the character generation process according to the flow chart shown in FIG. 14. When this process is started, the processing proceeds to a step 81, in which an output process for a set request message of a FIG. 40 is performed. Here, the main CPU 32 instructs the image control circuit 71 and causes the main display 11 to display a message for requesting a setting in which the FIG. 40 is mounted on the authentication unit 15 to read the figure ID (for example, “Please set the base of figure to the authentication unit on the operation unit. When authentication of the figure is started, the authentication unit light up brightly. So please do not remove the figure until the light is turned off.”). In a step 82 the main CPU waits until reading of the figure ID is finished. When the player sets the FIG. 40 to the

authentication unit **15** according to the displayed message, the authentication unit **15** reads the figure ID of the **FIG. 40** which is stored in the IC chip **44**, and the figure ID is inputted to the main CPU **32**. Then, the processing proceeds to a step **83**, in which the main CPU **32** sets the character generation instruction data having the read figure ID to the entry data. In a subsequent step **84**, predetermined data ("1" in the present embodiment) is set to the with-figure flag which indicates that the authentication unit **15** reads the figure ID of the **FIG. 40** (figure setting), and when the step **84** is executed the character generation process is ended.

[0104] When the processing proceeds to the step **70**, the main CPU **32** instructs the communication control portion **21** to operate the communication processing portion **22**, and transmits the entry data to the arcade server **2**. When the step **70** is finished, the game start process is ended.

[0105] In this manner, the first and second gaming machines **1** transmits the trade execution data to the database server **103** when the player selects "trade execution" in the trade selection process. Then, of the records stored in the figure management file **60**, the database server **103**, which receives the trade execution data, changes the player ID of the record based on the trade execution data.

[0106] Moreover, when setting of the **FIG. 40** is performed in the character generation process, predetermined data is set to the with-figure flag. Once the **FIG. 40** is set, the entry data having the character generation instruction data is transmitted to the database server **103** via the arcade server **2**, and in the database server **103** the figure ID is related to the player ID which is inherent in the player who performs the setting, then stored in the figure management file **60**, and used for determining whether or not the figure is already authenticated. In addition, a result of the determination by the figure management file **60** on whether or not the figure is already authenticated is transmitted from the database server **103** as a response signal, thus the player can select a figure corresponding to an authenticated figure to play the labyrinth battle game. However, if the figure setting is not performed, setting of the with-figure flag is not performed. Therefore, even if the figure is authenticated, it is necessary to set the **FIG. 40** to the authentication unit **15** to read the figure ID in order to play the labyrinth battle game in the with-figure mode. When the setting is performed, figure information corresponding to the read figure ID is generated in the database server **103**, whereby the labyrinth battle game can be played even if the **FIG. 40** is not set over again.

[0107] On the other hand, in the first gaming machine **1**, arcade server **2**, and center server group **5**, a process is executed in the order shown in **FIG. 15**, in relation to the above-described processing. **FIG. 15** is a sequence chart showing a sequence of an operation carried out among the gaming machine **1**, arcade server **2**, and center server group **5**.

[0108] In the first gaming machine **1**, in a step **100** a download request is transmitted to the arcade server **2** to download the application data, and thereafter the trade execution data is transmitted to the database server **103** (step **98**) in the trade selection process (step **61**). In the center server group **5** the processing proceeds to a step **301**, in which the CPU **401** of the database server operates as the changing means of the present invention to perform the

process of change of player ID. Specifically, the CPU **401** sets the player ID and figure ID of the figure-holding player, which are contained in the trade execution data, to the retrieval keys, and searches for a record corresponding to the retrieval keys from the figure management file **60**. Then, a record update process is performed in which the player ID stored in the searched record is changed to the player ID of the partner player for the change, which is contained in the trade execution data. Hereinafter the process of change of player ID is explained in detail with reference to **FIG. 8** and **FIG. 9**.

[0109] **FIG. 8** shows the figure management file **60** before the process of change of player ID is performed, and **FIG. 9** shows the figure management file **60** after the process of change of player ID is performed. Particularly **FIG. 9** shows the figure management file **60** after the process of change of player ID based on the trade execution data transmitted respectively from the first gaming machine **1** and second gaming machine **1** is performed. Specifically, based on the trade execution data transmitted from the first gaming machine **1** (player ID "0001" and figure ID "1000" of the figure-holding player, player ID "0012" of the partner player for the change), the CPU **401** changes the player ID **60a**, "0001" of the record **61** in **FIG. 8** (corresponding to the player ID "0001" and figure ID "1000") to "0012" which is the player ID of the partner player for the change to perform update to a new record **63** in **FIG. 9**. Similarly, based on the trade execution data transmitted from the second gaming machine **1** (player ID "0012" and figure ID "1101" of the figure-holding player, player ID "0001" of the partner player for the change), the CPU **401** changes the player ID **60a**, "0012" of the record **62** in **FIG. 8** (corresponding to the player ID "0012" and figure ID "1101") to "0001" to perform update to a new record **64** in **FIG. 9**.

[0110] As above, for the figure information (gaming object data) indicating the characteristics of each character, when the database server **103** relates the figure information to the player ID (player information) which specifies a player who can use the figure information in the labyrinth battle game (game), and stores thus obtained figure information, other player having a different player ID cannot player the labyrinth battle game using the figure information, whereby update of the figure information (unintended alteration of the data by the player) along with execution of the labyrinth battle game is prevented. As described in the present embodiment, if it is possible to change the correspondence between the figure information and the player ID which specifies a player who can use the figure information in the labyrinth battle game, the advantage of the player who can use certain figure information in the labyrinth battle game can be carried on to other player.

[0111] Further, as described in the present embodiment, the figure information is also related to the figure ID (discrimination information) stored in the **FIG. 40** so that exchange of the figure information corresponding to the **FIG. 40** (object to be read) can be performed along with exchange of the **FIG. 40**, whereby interest can be added when the player plays the labyrinth battle game, and intentions of collecting the **FIG. 40** can be raised.

[0112] Next, in the gaming machine **1** the card information and the like are transmitted in the step **63** as described above (**FIG. 15**). In the center server group **5** the processing

proceeds to a step 302 in which the CPU 401 in the database server 103 uses the card information and password transmitted from the gaming machine 1 to perform an authentication process for determining whether or not the player and the figure are registered, by referring to the figure management file 60. If registered, they are determined as authenticated, and the processing proceeds to the step 303, in which a response signal indicating the authentication result is transmitted to the gaming machine 1. In this case, in the database server 103 the same authentication process is performed for the eight gaming machines 1 that are installed in each of the arcades A and B.

[0113] Moreover, in the gaming machine 1 the entry data shown in the above-described step 70 (see FIG. 12) is transmitted. Then, in the center server group 5 the processing proceeds to a step 304, in which the game server 101 uses the entry data transmitted from each gaming machine 1, and performs player entry acceptance. Furthermore, in a subsequent step 305, an update of participation information of the player, and the figure ID corresponding to the character generation instruction data (this figure ID has figure IDs of a newly registered figure which is not authenticated, and of a figure which is already authenticated but is authenticated again) are used to perform registration or update of the figure to the figure management file 60, and to generate or update the figure information. In a subsequent step 306, players as opponents (four players in the present embodiment) are determined. It should be noted that the registration or update of the figure to the figure management file 60 is performed by adding the records which are related to the player ID and figure ID and stored in the figure management file 60, or by updating the records which involves change of the contents.

[0114] In a step 307, the database server 103 extracts the game data of each player who is an opponent, and the processing proceeds to a step 308, in which the extracted game data is transmitted to the arcade server 2. When the game data is received in the arcade server 2, the game data is transmitted to each gaming machine 1.

[0115] The gaming machine 1 performs a with-figure game process and a no-figure game process according to the flow charts shown in FIG. 16 and FIG. 17. FIG. 16 and FIG. 17 are flow charts respectively showing operation procedures of a game process in the with-figure mode (with-figure game process) and a game process in the no-figure mode (no-figure game process).

(With-Figure Game Process)

[0116] When the with-figure game process is started, the gaming machine 1 proceeds to a step 10 shown in FIG. 16 in which the gaming machine 1 waits until receiving the game data from the arcade server 2. After receiving the game data, the gaming machine 1 causes the RAM 33 to store it once, and the processing proceeds to a step 11, in which the main CPU 32 extracts the figure information corresponding to the figure ID of the FIG. 40 used by the player. In this manner, the extracted figure information is used to perform the game process in the with-figure mode. Next, the processing proceeds to a step 12, in which a processing of selecting costumes, dungeons and the like is performed.

[0117] Here, the main CPU 32 sets selections for the following items in the main display 11 more widely than

those for the no-figure game process. In this case, a selection screen which is not shown is displayed in the main display 11 so that the player can select the following items. Specifically, an attribute of the character (in the present embodiment, a costume that the character wears) corresponding to the FIG. 40 which is subjected to new settings and authenticated (or which is already authenticated), and a dungeon used in the labyrinth battle game can be selected by the player.

[0118] When the player selects a desired costume and dungeon by touching the main display 11 with a finger, information indicating the selection is inputted from the touch panel 11a to the main CPU 32. The step 12 is a processing for the with-figure mode, thus a plurality of types of costumes (three types, for example) can be selected, and two types of dungeons, i.e. a regular form or a special form, can be selected. On the other hand, there is no processing in the no-figure game process that is the same as the processing of the step 12, thus only a default costume which is defined for each character is set, and a regular form of dungeon is set.

[0119] The processing then proceeds to a step 13, in which an entitled-player setting process is performed. In this step any of the players (four players in the present embodiment) who participate in the labyrinth battle game is set as a player who can shift the labyrinth (an entitled player for the shifting), which is described hereinafter. Each of the players is set as an entitled player for the shifting.

[0120] In a subsequent step 14, a shift phase process is performed. The shift phase process is performed according to the flow chart shown in FIG. 18. When the shift phase process is started, the main CPU 32 proceeds to a step 31, in which an instruction is given to the image control circuit 71 to cause the main display 11 to display a labyrinth image 150 as the one shown in FIG. 20. The labyrinth image 150 has an entitlement table display portion 150a (players 1, 2, 3 and 4) which displays the presence or absence of the shift entitlement of the four players, or the attack priority, and a labyrinth display portion 150b which displays an image of the labyrinth configured with a plurality of wall portions, wherein an image of a plurality of characters 151 (an image of gaming objects of the present embodiment) is displayed in the labyrinth. Moreover, as the input prompting image of the present invention, the labyrinth image 150 has a timer display portion 150c which displays the remaining time in which are used the set time or an after-mentioned first elapsed time of the present invention, and encourages the players to perform an operation input, a life display portion 150d, and an explanation display portion 150e for showing an explanation on how to shift the wall portions. In the timer display portion 150c, the main CPU 32 operates as the display control means, and causes the main display 11 to display, and the numeric values displayed are decreased as the first elapsed time increases.

[0121] Next, the processing proceeds to a step 32, in which the main CPU 32 operates as the time measuring means to start measuring the first elapsed time. The first elapsed time indicates a time period elapsed from when the player can perform an operation input (the progress operation input or determination operation input) indicating that a wall portion to be shifted (shift wall portion) is determined on the screen (input start time), to when the player actually

touches a desired arrow a to perform the progress operation input or determination operation input. In a subsequent step 33 the main CPU 32 determines whether or not a shift wall portion is determined. If the shift wall portion is determined, the processing proceeds to a step 34, if not, the processing proceeds to a step 37. In the step 34 the main CPU 32 operates as the determination means to determine whether or not the first elapsed time is equal to or less than a first set time (10 seconds in the present embodiment). If the first elapsed time is within the first set time, the processing proceeds to a step 35, and if not, the processing proceeds to a step 36 without executing the step 35. In the step 35, the main CPU 32 operates as the bonus granting means, and add "1" to the value of the defensive power. The larger the numeric value of the defensive power becomes, the more the defensive power against attacks from other characters is enhanced, thus a beneficial bonus is obtained when the players proceed with the labyrinth battle game. In the following step 36 the main CPU 32 operates as the performance determination means to set a determined wall portion as the shift wall portion and determine an action (shifting the wall) of the character.

[0122] On the other hand, if the processing proceeds from the step 33 to the step 37, it is determined whether or not the first elapsed time is within a time limit (15 seconds in the present embodiment) for determining to shift a wall portion. If the first elapsed time is within the time limit for the shift determination, the processing returns to the step 33, and if not, the processing proceeds to a step 38, in which a random number extracted from the sampling circuit 36 may be used to randomly set any of the wall portions to the shift wall portion. Then, the processing proceeds to a step 39, in which a labyrinth image which is obtained after shifting the wall portion is displayed, and thereafter the shift phase process is ended. In this manner, determination on the shift wall portion can be performed within the time limit (15 seconds) for determining to shift a wall portion, but if it is performed earlier than the time limit (within 10 seconds), "1" is added to the value of the defensive power, thereby providing the player with a bonus.

[0123] Next, the processing proceeds to a step 15, in which a movement phase process is performed. The movement phase process is performed according to the flow chart shown in FIG. 19.

[0124] When starting the movement phase process, the main CPU 32 proceeds to a step 41 to instruct the image control circuit 71 and cause the main display 11 to display the labyrinth image 160 of a movement phase shown in FIG. 21. The labyrinth image 160 also has various display portions as with the labyrinth image 150 (an entitlement table display portion 160a, labyrinth display portion 160b, timer display portion 160c, and life display portion 160d), wherein a character 161 is disposed inside the labyrinth, and the labyrinth image has a destination specification display portion 160e having a display of a specification request message for a destination and a determination button for a destination.

[0125] Next, the processing proceeds to a step 42, in which the main CPU 32 operates as the time measuring means to start measuring a second elapsed time. The second elapsed time indicates a time period elapsed from when the player can perform an operation input (specification of a

destination) for specifying a destination of his character (input start time), to when the player performs an operation input (progress operation input or determination operation input) for proceeding with the game by touching the destination specification display portion 160e. In a subsequent step 43, the main CPU 32 determines whether or not a destination is specified, and if a destination is specified the processing proceeds to a step 44, and if not the processing proceeds to a step 48. In the step 44, an image with a changed display color of the floor on which the character moves from its original position to a destination is displayed (not shown in the figures) to highlight the destination, and the processing proceeds to a step 45. Then, it is determined whether or not the player touches the determination button of the destination specification display portion 160e (to determine a destination). If the button is touched the processing proceeds to a step 46, and if not the processing proceeds to the step 48. In the step 46, the main CPU 32 operates as the determination means to determine whether or not the second elapsed time is equal to or less than a second set time (15 seconds in the present embodiment). In this step, if the second elapsed time is within the second set time, the processing proceeds to a step 47, and if not the processing proceeds to a step 49 without executing the step 47. In the step 47, the main CPU 32 operates as the bonus granting means to add "1" to the value of the attacking power. The larger the numeric value of the attacking power becomes, the more the attacking power is enhanced, thus a beneficial bonus is obtained when the players proceed with the labyrinth battle game.

[0126] On the other hand, when the processing proceeds to the step 48, it is determined whether or not the second elapsed time is within the time limit for destination determination (30 seconds in the present embodiment). If the second elapsed time is within the time limit for destination determination, the processing returns to the step 43, and if not, the movement phase process is ended (in this case, the character does not move and waits at its original place). Further, in the step 49 the main CPU 32 operates as the performance determination means to determine an action of the character (movement inside the labyrinth) according to the determination made in the previous steps, and displays an image obtained after the character is moved. Then, the movement phase process is ended. In this manner, determination of a destination can be performed within the time limit for destination determination (30 seconds), but if it is performed earlier than the time limit (within 15 seconds), "1" is added to the value of the attacking power so the player can be provided with a bonus. It should be noted that in the movement phase process in the with-figure mode, a special card (a teleport card with which random movement can be performed, a through-wall card with which the character can pass through a wall, or the like) can be used as a reward which cannot be obtained in the no-figure mode.

[0127] Returning to FIG. 16, the processing proceeds to a step 16 following the movement phase process, in which the main CPU 32 determines whether or not a fight is generated. Here, if a fight is generated (in the case where a plurality of characters are present in a range in the labyrinth where an attack can be begun), the processing proceeds to a step 17, but if no fight is generated, the processing proceeds to a step 20.

[0128] In the step 17 a fight selection phase process is performed. Here, the main CPU 32 instructs the image control circuit 71 and causes the main display 11 to display a fight selection image 170 (having an entitlement table display portion 170a, and characters are disposed in the labyrinth) such as the one shown in FIG. 22. With reference to this fight selection image 170, each player (four players in the present embodiment) selects an opponent for an attack, and selects to use a technique card or not, the technique card showing techniques of each character, and also selects which technique card to use. It should be noted that the order of attacks mounted by each character is based on a shift-entitled player.

[0129] In the fight selection phase process, the technique card can be selected (the technique card is provided to the characters at the end of the game as a reward in accordance with a record of a battle). In the case of the with-figure mode, there are more types of technique cards to be provided and more selections of the technique cards than in the case of the no-figure mode. Further, in the with-figure mode, probability of being provided with a rare card, which generates beneficial bonus information (for example, a special technique is generated), is set higher than the no-figure mode. Specifically, if the player plays a game in the with-figure mode by using the FIG. 40, multiple technique cards including the rare card are provided, whereby the probability of being able to use them is increased.

[0130] In this case, the main CPU 32 searches a technique selection table for a first mode (for example, table in which a random number is associated with a technique card to be selected). When comparing the technique selection table for a first mode with a technique selection table for a second mode, the range of random numbers in relation to the rare card is set more widely in the former technique selection table than the latter technique selection table.

[0131] In a subsequent step 18 a battle process is performed. Specifically, attacking power and defensive power are specified and a range of attack is set for each character according to the figure information thereof, whereby the outcome of the game for each character is determined by comparing the value of the attacking power and the value of the defensive power in battling characters, upon consideration of whether using the technique card or not. In this case, the sub display 12 displays the battle image 180 showing a scene where a characters 181a and 181b battle, as shown in FIG. 23.

[0132] Next, in a step 19 the fight is ended and a score calculation process is performed. In this step lives are added or deducted according to a result of the battle process of the step 18 (the type of the character which becomes the opponent, and victory or defeat), and a title or a sacred gem is provided to the character or deprived from the character (in the with-figure mode, various titles such as "champion", "master" or "professional" are provided in accordance with the performance of the character). In the subsequent step 20 it is determined whether an end condition is established or not. If the end condition is established (score is not more than 0), the with-figure game process is ended. If it is not established (score >0), the processing returns to the step 13, and the above processing is repeated. For the player with a score of 0 or less, the labyrinth battle game is ended, and, in place of this player, the main CPU 32 participates in the

battle as another character. It should be noted that, although not shown, if a player with no life uses a recovery card or inserts a coin, a certain amount of life is recovered.

[0133] As described above, upon determination of a shift wall portion or a destination within the set time for each process of the shift phase process and the movement phase process in the gaming machine 1, the values of the defensive power and attacking power are added, and the defensive power and attacking power are enhanced. Moreover, when the characters battle, the defensive power and attacking power are used to determine which character wins or loses, and the progress of the labyrinth battle game is controlled. For this reason, the addition process to the values of the defensive power and the attacking power is the incentive for promptly allowing each player to determine on a shift wall portion and a destination. Accordingly, the player does not have to prolong operation input needlessly, and early operation input can be prompted and the progress of the entire game can be hastened.

[0134] Moreover, the timer display portions 150c and 160c are displayed respectively in the shift phase process and the movement phase process, and they display numbers that gradually decrease along a time period elapsing from the start of measurement of an elapsed time, thus it is possible to encourage the players to perform an input operation as soon as possible.

[0135] Particularly, as in the gaming machine 1, when playing a type of a game in which a plurality of players participate, if one player prolongs an operation other players have to wait, thereby causing stress or frustration. However, this does not happen in the gaming machine 1, and each of the players can have the true fascinating aspect of the game, which is supposed to be obtained through the labyrinth battle game.

(No-Figure Game Process)

[0136] The no-figure game process is performed by following a flow chart which is substantially the same as the with-figure game process shown in FIG. 17. When comparing the no-figure game process with the with-figure process, the difference is that the no-figure game process is not provided with the step 12.

[0137] In the no-figure mode, a game is proceeded without using a figure, when the game data is received and stored in the RAM 33, if the response signal contains a figure ID (if there is an authenticated figure), the figure information corresponding to the figure ID is extracted.

[0138] Moreover, since the step 12 is not executed, unlike the with-figure mode described, above, the players have no choice in the costumes and dungeons, thus the content of a game is limited in comparison with the labyrinth battle game in the with-figure mode. Furthermore, the selections in the various cards that can be selected in the step 15 and the technique cards that can be selected in the step 17 are limited.

[0139] In addition, a title corresponding to a battle result is provided to a character in the step 19, but in the no-figure mode a title, "ronin", is given even if a good battle result is obtained.

[0140] In this manner, in the gaming machine 1 a game can be proceeded not only when the FIG. 40 is used but also

when the **FIG. 40** is not used. Also, when the **FIG. 40** is used, a benefit that cannot be obtained when the **FIG. 40** is not used is obtained, so the players can have the intentions of collecting the figure, and the fascinating aspect of the game which is obtained by making full use of the characteristics of the labyrinth battle game can be provided. Especially when playing the labyrinth battle game using the **FIG. 40**, there are advantages depending on the progress status of the game, such that scores of the character matching the figure are increased, the defensive power or attacking power is enhanced, and a title is provided, thus it is possible to encourage the players to repeatedly use the figure, and satisfy the players.

[0141] The gaming server and gaming system of the present invention are described based on the above-described embodiments. However, the present invention is not limited to the above embodiments. For example, in the above embodiments the present invention is described on the premise of exchange of the **FIG. 40**, but the correspondence between the player ID and the figure information may be changed to the player ID of the other player when exchanging the **FIG. 40** with other article or the like without performing exchange of the figures. Further, the **FIG. 40** of the player who loses in the labyrinth battle game may be held by the winner, in which case the correspondence between the player ID and the figure information of the loser may be related to the player ID of the winner.

[0142] In the present embodiments, explanations are provided by taking the figure as an example of an object to be read. The present invention, however, can be applied to a case in which an object to be read which is different from the figure is used. For example, a game card in the form of a card, in which a picture or figure of a character is drawn and ID information and the like are stored, or cassette may be used. Also, the present invention provides explanations by taking the gaming machine 1 where the labyrinth battle game can be played, as an example, but the present invention can be applied to a gaming machine in which other game can be played. Examples of such gaming machine include a gaming machine on which can be played a game where a plurality of players can appear, such as baseball, soccer or the like, and in which the game can be played by doing a simulation on team play by using a figure or cassette corresponding to each of the players.

[0143] Moreover, the gaming machine 1 is equipped with the main display 11 and sub display 12 for displaying game images, but the main display 11 and the sub display 12 may be provided separately.

[0144] In the above embodiments, explanations are provided by taking an example of a case where the gaming machine 1 has the image display means, reading means, and game progress control means. However, the gaming system (the gaming system of the present invention) may be configured such that each of the above means is provided to either the gaming machine 1 or the arcade server 2. Furthermore, the gaming system may be configured by providing a device having the same function as each of the above means separately from the gaming machine 1 and arcade server 2.

[0145] As described above in detail, according to the present embodiments, it is possible to provide a player with the fascinating aspect of a game in which is used an image

of a gaming object showing a figure or other object appearing in a game, and also to carry on the advantage of the player who can use the gaming object data to other player, while preventing inappropriate alteration of the gaming object data.

What is claimed is:

1. A gaming server which is connected to a gaming machine on which a game is played which utilizes an image of a gaming object which shows a figure or other object appearing in a game, the gaming server comprising; a changing unit which changes a correspondence between gaming object data indicating characteristics of each of the gaming objects and player information for identifying a player utilizing the gaming object data in the game.

2. The gaming server according to claim 1, further comprising a storage unit which stores the player information for identifying a player utilizing the gaming object data * in the game in correspondence to the gaming object data, wherein the changing unit changes the player information corresponding to the gaming object data stored in the storage unit to other player information.

3. A gaming system, comprising a gaming machine on which a game is played which utilizes an image of a gaming object which shows a figure or other object appearing in a game, and a gaming server which is connected to the gaming machine, wherein the gaming server comprises; a changing unit which changes the correspondence between gaming object data indicating characteristics of each of the gaming objects and player information for identifying a player utilizing the gaming object data in the game.

4. The gaming system according to claim 3, wherein the gaming machine further comprises a game progress control unit which controls the progress of the game in which is utilized a gaming object image corresponding to the gaming object data obtained after the correspondence is changed by the changing unit.

5. The gaming system according to claim 3, wherein

the gaming machine further comprises a reading unit which reads discrimination information corresponding to the gaming object from an object to be read in which the discrimination information is stored, and a player information reading unit which reads the player information for identifying a player utilizing in the game the gaming object data showing the characteristics of each of the gaming objects;

the gaming server further comprises a storage unit which stores the gaming object data in correspondence to the player information and discrimination information; and,

among the gaming object data items stored in the storage unit, regarding the gaming object data items corresponding to the discrimination information and player information which are read by the reading unit and the player information reading unit, the changing unit changes the player information corresponding to the gaming object data items to other player information.

6. The gaming system according to claim 3, further comprising an arcade server installed in a game arcade, a plurality of gaming machines connected communicably to the arcade server via dedicated lines, and an in-arcade router installed in the game arcade, wherein the arcade server is

connected to the gaming server via the in-arcade router, communication lines and an Internet.

7. The gaming system according to claim 3, wherein the gaming machine comprises a correspondence change input unit which performs input for selecting change of correspondence between the gaming object data and the player information, and wherein correspondence change information which is input from the correspondence change input unit is transmitted to the gaming server.

8. The gaming system according to claim 5, wherein, when the gaming server receives the correspondence change information, the changing unit changes the player information corresponding to the gaming object data to other player information on the basis of the correspondence change information.

9. The gaming system according to claim 3, wherein the player information is stored in an ID card.

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