



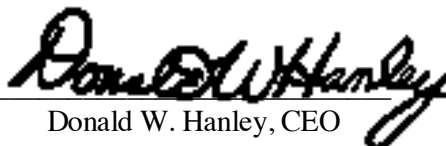
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Certification

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(54) [Title of the invention] Communicator and software distribution system using said communicator

(57) [Abstract]

[Purpose] The purpose of the present invention is to provide a game machine - combined communicator which plays games without game cassettes and a karaoke device - combined communicator which can perform karaoke without video disks and the like, by receiving games information or karaoke information transmitted using communication lines, and a game or karaoke software distribution system using the said communicator.

[Constitution] If a desired game request is transmitted to the distribution center 100 from a personal communicator 1, the corresponding game information is returned from the distribution center 100, hence the user can play a desired game without a game cassette and the like.

[Scope of the Patent]

[Claim 1] A communicator comprising: a communication means which is connected to a communication line, and transmits or receives via said communication lines; and a computer which outputs control commands with respect to the said communication means, and inputs the data from the above communication line via the above communication means and transmits the data to the above communication line via the above communication means; the communicator wherein, at least, in case the data inputted from the above communication line is game information constituted by images or images and audio, it comprises an input data temporary memory means which temporarily stores the said game information, and also the above described computer comprises a game information output means by which in case the data stored in the said input data temporary memory means is game information, the game information is outputted to the internal or external image display means, and in case there are audio data also, the data is outputted to the internal or external audio output means .

[Claim 2] The communicator according to claim 1 wherein above described computer comprises a print data output means which outputs printing data to the internal or external printing means.

[Claim 3] A game software distribution system using a communicator wherein said system comprises a distribution center connected to enable transmission and reception with the communicator according to claim 1 or claim 2, and in case there is a game request to above described distribution center via above described communication line from above described communicator, the game information corresponding to the request from the distribution center is transmitted to the applicable communicator via the above described communication line, and also the game information that was transmitted and is temporarily stored in the above described input data temporary memory means is erased after a specified time after the transmission.

[Claim 4] A communicator comprising: a communication means which is connected to a communication line and transmits or receives via said communication lines; and a computer which outputs control commands with respect to the said communication means, and inputs the data from the above communication line via the above communication means and transmits the data to the above communication line via the above communication means; the communicator wherein, at least, in case the data inputted from the above communication line is karaoke information constituted by audio or audio and images, it comprises an input data temporary memory means which temporarily stores said karaoke information, and also the above described computer comprises a karaoke information output means in which in case the data stored in the said input data temporary memory means is karaoke information, the karaoke information is outputted to the internal or external audio output means, and in case image data is contained also, the data is outputted to the internal or external image display means.

[Claim 5] A Karaoke software distribution system using a communicator wherein said system comprises a distribution center which is connected to enable transmission and reception with the communicator according to claim 4, and in case there is a karaoke request to above described distribution center via above described communication line from the above described communicator, the karaoke information corresponding to the request from the distribution center is transmitted to the applicable communicator via the above described communication line.

[Detailed explanation of the invention]

[0001]

[Utilized field in industry] The present invention relates to a game machine and karaoke device - combining communicator used for an interactive system and a game or karaoke software distribution system using the communicator.

[0002]

[Prior art and problems the present invention attempts to solve] In recent years, the so called TV games have been highly popularized. According to said TV game system, the game cassettes which have stored the game information (so called game software) constituted by images or image and audio are set into the game device main body and read, outputted into TV receivers and the like, thus games are played. As to the TV receiver, one can use the TV receiver for general broadcasting at home, hence the users buy game machine main body and game cassettes. If one buys a game cassette which stores the software one wants to play, the user can play the game repeatedly at the desired time.

[0003] However, according to the traditional TV games, it was necessary to buy a game cassette for every game one wants to play, and these game cassettes are expensive. The advantage is that one can play it repeatedly, but depending on the game contents and user preferences, one can get tired of it while playing repeatedly. For instance, even if one wants to play just once, one cannot play unless there is a game cassette, hence it is inconvenient.

[0004] Moreover, karaoke request devices are popularized not only at the karaoke box stores and the like but also as home karaoke request devices. However, as to karaoke, it is indispensable to enhance not only the hardware aspect such as karaoke device but also software aspect. Moreover, currently as to the software aspect, for instance, one must own karaoke information storage medium such as video disk or video tapes which stores audio and image information, or music tape if one wants only audio. Because of this, the quantity one can own individually are not high, and for instance, even if there is no problems as far as purchasing cost, there is a big storage space problem. In addition, when a new melody is released, one must buy a video disk every time and this is troublesome.

[0005] Hence, the present invention was attempted in view of such problems, and the purpose of the present invention is to provide a game machine - combined communicator which plays

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games without game cassettes and a karaoke device - combined communicator which can perform karaoke without video disks and the like, by receiving games information or karaoke information transmitted using communication lines, and a game or karaoke software distribution system using the said communicator.

[0006]

[Means and operations to solve the problems] The communicator in claim 1, in order to attain the above described purpose, comprises: a communication means which is connected to a communication line, and transmits or receives via said communication lines; and a computer which outputs control commands with respect to the said communication means, and inputs the data from the above communication line via the above communication means and transmits the data to the above communication line via the above communication means, and the communicator is characterized such that, at least, in case the data inputted from the above communication line is game information constituted by images or images and audio, it comprises an input data temporary memory means which temporarily stores the said game information, and also the above described computer comprises a game information output means by which in case the data stored in the said memory means is game information, the outputs the game information is outputted to the internal or external image display means, and in case there are audio data also, the data is outputted to the internal or external audio output means .

[0007] According to said communicator, the computer outputs the control commands to the communication means and transmits to the communication means via communication lines and receives therefrom. Moreover, the computer transmits data via a communication means and a communication line. Or, the computer inputs data via a communication line and a communication means.

[0008] Input data temporary memory means, at least in case the data inputted from the communication line are game information constituted by images or images and audio, temporarily stores the game information and as to game information output means in the computer, in case the data stored in the input data temporary memory means are game information, the game information is outputted to the internal or external image display means, and audio data also, in some cases, are outputted to the internal or external audio output means.

[0009] Moreover, as described in claim 2, if the computer is designed to comprise a print data output means which outputs the printing data to the internal or external printing means, the data in the computer can be printed by the printing means. For instance, when a game is interrupted and the like, the current status can be outputted (for instance, when a plural number of characters are outputted, the information such as who dealt with which character or at the point, the maximum scoring person and the like), and this is convenient when resumed.

[0010] Moreover, the game software distribution system using a communicator in claim 3 comprises a distribution center which is connected to enable the transmission and reception with the above described communicator, and in case there is a game request to the distribution center via the communication line from the communicator, the game information corresponding to the request from the distribution center is transmitted to the applicable communicator and also, the game information that was transmitted and temporarily stored in the input data temporary

memory means is structured to be erased after a specified time after transmission. Regarding this erasure, on the communicator side, in case the game information is received, a method can be considered in which a control means is provided to erase the data after a specified time, or another method in which the information regarding the specified time is transmitted along with the game information from the distribution center. If done like this, depending on the game contents and the like, the specified time can be changed.

[0011] According to the said software distribution system, if a user transmits a desired game request to the distribution center from the communicator, a corresponding game information is returned from the distribution center, hence the user can play a desired game without owning game cassettes and the like. Moreover, the transmitted game information is temporarily stored in the input data temporary memory means of the communicators, hence once transmitted, the same game request from other communicators can be dealt with, and large number of end users having communicators can be dealt with.

[0012] In addition, the structure is such that game information temporarily stored in the input data temporary memory means is erased after a specified time after the transmission, hence in case a fee paying transmission system is built, the game information once transmitted will not be used as one pleases without being transmitted from the distribution center, which is reassuring. The user, in case one wants to use the game again, is required to request again. The game information can be downloaded by the user and used on demand unlike the traditional game cassette. Since the software is transmitted by the communication line, it is realistically not profitable to be greatly lower than the game cassette price.

[0013] However, if it is set to be erased by a specified time, as in this system, one time game fee can be set up to be greatly below that of the game cassette. Hence, even if it is a game one plays only once traditionally, some user who purchased game cassettes and feel that cassettes were high priced will be satisfied. Moreover, some users are so engrossed in playing games and cannot stop, causing family problems. In particular, many TV game users are young grade school pupils, for whom this is a deep rooted problem. When this problem arises, said system is forced to automatically stop at a specified time, and hence this system responds to the demands of guardians relating to the children's discipline.

[0014] At the same time, the communicator in claim 4 comprise: a communication means which is connected to a communication line and transmits or receives via said communication lines; and a computer which outputs control commands with respect to the said communication means, and inputs the data from the above communication line via the above communication means and transmits the data to the above communication line via the above communication means;

the communicator is characterized such that at least, in case the data inputted from the above communication line is karaoke information constituted by audio or audio and images, an input data temporary memory means is provided which temporarily stores said karaoke information, and also the above described computer comprises a karaoke information output means in which in case the data stored in the said input data temporary memory means is karaoke information, the karaoke information is outputted to the internal or external audio output means, and in case image data is contained also, the data is outputted to the internal or external image display means.

[0015] According to said communicator, the input data temporary memory means, at least in case the data inputted from the above communication line is game information constituted by images or images and audio, game information is stored temporarily and in case the data stored in the said input data temporary memory means is game information, a game information output means in the computer outputs the game information to the internal or external image display means, and in case there are audio data, a game information output means in the computer outputs the data to the internal or external audio output means .

[0016] Moreover, the karaoke software distribution system which uses the communicator in claim 5 comprises a distribution center which is connected to enable the transmission and reception with the above described communicator, and in case there is a karaoke request to above described distribution center via above described communication line from the above described communicator, karaoke information corresponding to the request from the distribution center is transmitted to the applicable communicator via the above described communication line.

[0017] According to the said software distribution system, if the user transmits the desired karaoke request to the distribution center by the communicator, the corresponding karaoke information is returned from the distribution center, hence the user can play the desired karaoke without owing a karaoke information medium such as a video disks and the like. Moreover, the karaoke information thus transmitted is temporarily stored into the input data temporary memory means of the communicator, hence once transmitted, the same karaoke request from another communicator can be dealt with and so large number of end users with communicators can be dealt with.

[0018] The following will explain the embodiments of the present invention. Figure 1 is a block drawing of the personal communicator 1 of this embodiment; figure 2 is a block drawing of the software distribution system using the said personal communicator 1. As shown in figure 1, said distribution center comprise a distribution center 100, a personal communicator 1, and transmission paths 200 as communication lines which connect the distribution center and personal communicator 1.

[0019] The distribution center 100 comprises a game software data base 101, a karaoke information base 103 and other data base (group) 105; a game information transmitter 111, a karaoke information transmitter 113 and other information transmitter 115 to search information from the corresponding data base of each 101, 103 and 105 and transmit them; and a control unit 120 which controls each data transmitter 111, 113, 115 and a head end 130 to output or input external signals.

[0020] The control unit 120 inputs via the head end 130 the request data transmitted from the personal communicator 1 via the transmission paths 200. The data that corresponds with the request is retrieved from the data base 101, 103, 105 by controlling the data transmitters 111, 113, 115, and is transmitted to the transmission paths 200 via the head end 130.

[0021] In the embodiment, the transmission paths 200 are coaxial cables and connected to a plurality of personal communicators 1. Next the structure of the personal communicator 1 will be explained. As shown in figure 1, the personal communicator 1 comprises a terminal modem 3, a timer 4, a CPU 5, an input device 6, ROM 7, memory 8, a video image circuit 9, an audio source 10, an audio amplifier 11, a speaker 13, an image synthesis circuit 15, a monitor 16, a control unit connector 21, a microphone connector 23, a data input/output control unit 25 and a data input/output connector 27.

[0022] The terminal modem 3 is connected to the transmission paths 200 and comprises a modulator/demodulator 3a and a video tuner 3b which selects a channel of the images. The input device 6 may be a keyboard or a mouse and the like, and is used by a user of the communicator to input a desired game software number or the desired karaoke music number to be played or other processing instructions. When a control unit 31, which is for exclusive use for playing games, is connected to the control unit connector 21, the control unit 31 can be operated only for playing game. The control unit 31 is provided with a joy stick or other control button widely provided on TV games and the like.

[23] By connecting a microphone 33 to the microphone connector 23, when using karaoke, the user can have one's singing voice output from the speaker 13. At the same time, the data input/output connector 27 is connected to the data output cable 37 which is connected to a printer 40, a personal computer 41 and the like.

[0024] Next, the control executed in CPU 5 will be now explained. When the power source (not shown in figure) is turned on, a main menu is displayed, among which "call the distribution center" is selected. From the point when host center call processing is activated, the explanation will be continued while referring to Figure 3.

[0025] First, the using item display is executed - S1000. The using item display comprises the instructions of "selection display"(for instance, display [please select a desired item to use] and item list to be used (games, karaoke and other items)).

After this display, a decision is made at step S1010. Then the individual processing mages of selected item name to be used are displayed at step S1020. The display of individual processing images comprises the display which seeks an input or a selection and a list of individual process name. After displaying this individual process image, if an input or a selection is executed, the individual processing is executed at step S1030. In executing this individual processing, first it is connected to the distribution center and an interactive communication is executed between the distribution center and personal communicator 1, and a processing is executed responding to each individual processing content.

[0026] First, regarding the control when games are played, an explanation is offered including its procedure. If a game is selected in the using item display at the above described step S1000, the individual process image as in figure 4 is displayed. An explanation is offered here. They are a display 301 and an individual process name list 303 which seeks an input or a selection. The individual process name lists 303 are (1) through (3), and as to the process [(1): desired game number], if a direct game number is inputted into the game number input column 305 on this screen, the applicable game information will be transmitted after that. Moreover, as to the process [(2): game number list], a list of game number that can be delivered from the game data base 101 of the current distribution center 100 is displayed. As to the process [(3): fee display], for instance, current month accumulative fees or past fees are displayed.

[0027] If one wants to start a game in actuality, one selects the above described (1) or (2). For instance, in case the desired game number is already known, the cursor is moved to the first game number input column 305, and the number is inputted using ten keys and the like. However, if the number is not known, one selects (2).

[0028] The (2) game number list process is simply explained. When (2) is selected, the distribution center 100 transmits the data relating to the list display of the game number and the data is displayed. In detail, as shown in figure 5, it is divided into an input area 311 and display part 313. if the display part 313 is scrolled, undisplayed data can be seen. In the display part 313, in addition to the game number and game name, [maximum participant number] and [fee] are displayed. Hence, using this as a display reference, one can seek the desired game number and inputs into the input area 311 and game number input column 315.

[0029] Moreover, for instance, in case a new game is played for the first time, sometimes, one wants to know the game content in summary. In that case, if a game number is inputted into the game number input column 317 of the [B: game content explanation display] of the input area 311, the summary explanation of the game content is displayed in the display part 313. Hence, the user can select the game by looking at the display.

[0030] Moreover, if one prints the game number list display, from the next time on, one can select a desired game very quickly. In that case, if one selects the [C. print] of the input area 311, one can print by the printer 40 connected via a data input output connector 27 and a data output cable 37 shown in figure 1.

[0031] An explanation is offered here about the execution process when a desired game number is inputted into the number input column 305 in figure 4 by above described individual

processing (1) and into the game number input column 315 in figure 5 by the individual processing (2). First, game request data is generated at step S1100. The game request data comprises the identification number of the personal communicator 1 which transmits data and the desired game number and the like. The generated game request data is then transmitted to the distribution center 100 at step S1110.

[0032] At the distribution center 100 (figure 2), the received request data is input by the control unit 120 via the head end 130. Then, game information corresponding to the request is retrieved from the game software game data base 101 by controlling the game information transmitter 111. The retrieved game information is transmitted via the head end 130 to the transmission paths 200 and is transferred to the applicable personal communicator 1. First and second specified times, which will be described later in detail, are also transmitted.

[0033] Turning back to figure 6, the game information is received at the personal communicator 1 at step S1120 and stored in the memory 8 at step S1130. When the storage of the game information into the memory 8 is completed, the reception completion is indicated on the monitor 16 at step S1140. Further, reception completion data is transmitted to the distribution center 100 at step S1150, thus this processing routine is completed for now, and awaits the next operation. When, for example, a game start operation is instructed, the game information stored in the memory 8 is started.

[0034] In addition, at step S1150, by transmitting the reception completion data to the distribution center 100, at the distribution center 100, a billing processing is executed. This billing process will be mentioned later. Next, game information automatic erasure means will be explained referring to Figure 7. When the game information reception related processing shown in figure 6 is executed, the reception completion time is retrieved at step S1200. Then, the current time is also retrieved and the time which has elapsed after the completion of the data receipt is calculated at step S1210. Next, it is determined at step S1220, whether or not the first specified time has elapsed. If a specified time has not elapsed, the flow goes back to the step S1210. Thus, when the first specified time has elapsed, warning is issued at step S1230. Further elapsing time is calculated at step S1240, and waits for the second specified time elapse at step S1250, and if the second specified time has elapsed, the game information stored in the memory 8 is erased at step S1260, and the current process ends.

[0035] The warning given at step S1230 may take various forms of warnings, such as a message reading "Time Out in Five Minutes!" on the monitor 16, or a specified alarm sound. Moreover, the first specified time at step S1220 can be set to for instance about 5 minutes before the second specified time.

The warning may be provided a plurality of times, such as five minutes before, two minutes and one minute before. If there is this warning, when the game is interrupted and the like, one can print the current status from the printer 40 (for instance, when a plural number of characters are outputted, who dealt with which character or at that time, the data as to the maximum scoring person and the like), hence one can resume the same game, making it very convenient.

[0036] The intent that the distribution center 100 will execute billing processing, relating to the process at step S1150 in figure 6 is described above. The billing process is explained now. As a billing system, when largely classified, there are a billing system of the so called fixed amount system in which a fee is charged for using for a fixed period such as per month and a billing system of the so called pay per play system in which a fee is charged for the information (data) when used.

[0037] Regarding both systems, adoption adequacy varies depending on the distribution center mode, status and the like. But realistically, for instance, an idea is that the cost could be also changed, depending on the game content (content complexity or scale size) or whether the game is new or old. In the said embodiments, in order to deal with the pay-per-play system, based on the reception completion data transmitted from the personal communicator 1 at step S1150, a billing system for each terminal is adopted. Actual fee can be automatically debited from the specified account at a bank.

[0038] However, according to pay by play system, even if one incurred considerable expense, one finds out only at the payment time and particularly when an automatic withdrawal is done, one may not sometimes notice. Because of this, if one selects [(3): fee display] shown in figure 4, one can find out the accumulative fee up to the current time and past fee (fee when paid last time or fee for the last half a year or for one year and the like), and particularly, one can prevent an incidence beforehand in which a child used while the parent did not know and an unexpected high amount fee was charged.

[0039] As explained above, according to the said distribution center, if the user transmits a desired game request to the distribution center 100 from the personal communicator 1, the corresponding game information is returned from the distribution center 100, hence the user can play a desired game without owing game cassettes and the like. Moreover, the transmitted game information is temporarily stored in the memory 8 of the personal communicator 1 (corresponds to the input data temporary memory means of the present invention.), hence once transmitted, the same game request from the separate personal communicator 1 can be dealt with, hence a large number of end users with a personal communicator 1 can be dealt with.

[0040] Furthermore, the game information temporarily stored in the memory 8 is erased in a specified time after transmission. Hence in case the payment - based distribution center 1 is built, as the transmission side, one does not have to worry since the game information once transmitted will not be used arbitrarily without being transmitted from the distribution center. The user, in case one wants to play the game again, has to request again. Suppose the once transmitted game information can be downloaded on the user side, and after that, if it can be used as one pleases, then it merely means that software was transmitted by the communication line instead of the

traditional game cassette, and it is realistically impossible to be lower than game cassette price from the profitability aspect.

[0041] However, if the system is set to erase it within a specified time as in the system, a fee per game can be set up to be greatly below the price of the game cassette. Because of that, the game may be traditionally played only once, but some users who purchase game cassettes and feel that they are high priced will be satisfied also. Moreover, for instance, one gets so engrossed in playing games, and cannot stop, thus causing problems at home sometime, particularly there are many grade school kids who are TV game users, hence the above described problem has a strong root. At this time, according to this system, one is forced to automatically stop within a specified time, hence for instance, this responds to the guardian's request relating to the children's discipline at home.

[0042] The above described embodiment was explained based on the premise that a game is played only by each personal communicator 1, but a game can be played among people who are physically separated, that is, among a multiple number of personal communicators 1. For instance, using the above described transmission paths 200 or phone lines and the like, inter personal communicators 1 are connected to enable interactive communications. Then, if the same game information is delivered to each personal communicator 1, both personal communicators 1 have the same characters, thus communication data needs only character number and position data. Hence, on the monitor 16 of each personal communicator 1, many characters that are mutually operated can be controlled, and games can be played in real time.

[0043] Moreover, in case of the so called role playing games, the map data can be divided and supplied/sold. That is, in order to move to the map data, it is necessary to download the map data. In that case, in response to the [strength] level on the so called game, the map data can be set up to be modified. Moreover, every time one buys a map data, it can be set up to transmit an approval data. If a printer 40 or a fax is connected so that the data can be outputted, this becomes the approval certificate.

[0044] Next, the control will be explained in case karaoke is performed. The basic flow is the same as the above described game, hence duplicating parts are omitted. Moreover, since it is karaoke, a microphone 33 is connected to the microphone connector 23. If one selects karaoke in the using item display at step S1000, individual process images which are the same as figure 4 are displayed. That is [(1): desired Karaoke number], [(2): karaoke number list], [(3): fee display]. In case one wants to start karaoke, in (1) or (2), a desired karaoke number is inputted.

[0045] In the personal communicator 1, karaoke request data is generated and is transmitted to the distribution center 100. The distribution center 100 retrieves karaoke information corresponding to the request from the karaoke information 103 by controlling the karaoke information transmitter 113, and transfers this to the applicable personal communicator 1.

[0046] The melody data received at the personal communicator 1 via a modulator - demodulator 3a is temporarily stored in the memory 8. At the same time, the CPU 5 transmits melody selection data, which is predetermined according to the genre of each selected melody, to the video tuner 3b in order to select visual data suitable to the selected melody content. Further, the CPU 5 synchronously outputs to the video image circuit 9 and the audio source 10 the lyric data and music performance data in the melody data stored in memory 8, respectively. The video image circuit 9 converts the information concerning the lyrics and the like into lyrics/image data and outputs them.

[0047] The audio source 10 converts the music performance data into audio signals, and outputs to an audio amplifier 11. Next, the audio amplifier 11 synthesizes the audio signals of the music performance melody and the voice signals from the microphone 12, amplifies them and outputs to the speaker 13 as audio signals. On the other hand, the video tuner 3b reads the background visual data selected according to the melody selection data, and outputs to the image composite circuit 15. Then, the image synthesis circuit 15 synthesizes the background visual data and the lyrics/image data and outputs the video signals to the monitor 16.

[0048] This karaoke music performance will be described more in detail. In case the melody data is transmitted from the distribution center 100, RF signals as video information and RF signals converted from the melody data are multiplexed and are transmitted to the personal communicator 1 via the transmission paths 200 which are coaxial cables. The CPU 5 of the personal communicator 1 transmits the specified melody selection data to the video tuner 3b (figure 1) of the terminal modem 3 in order to select the video channel according to the received melody data. The melody selection data is preset according to for instance the genre of melodies. After that, the melody data is transmitted to the audio source 10 and the music performance is started.

[0049] When the music performance is ended, music performance completion data is transmitted to the distribution center 100. By transmitting the music performance completion data to distribution center 100, the distribution center 100 executes the billing process. The billing process in case of above described games were per game, but in case of karaoke, it takes a few minutes per melody, hence billing can be done per hour and the like, the billing system can be set up according to the actual situation.

[0050] Moreover, in case of karaoke, the control such as the game information automatic erasure means (figure 7) in case of the above described game is not necessary. Like this, according to the karaoke distribution center which uses said personal communicator 1, if the user transmits a desired karaoke request to the distribution center 100 from the personal communicator 1, the corresponding karaoke information is returned from the distribution center 100, the user can plays a desired karaoke without owning a karaoke information medium such as video disks and the like. Furthermore, the transmitted melody data and lyrics data are temporarily stored in the

memory 8 of the personal communicator 1, hence once transmitted, the same karaoke request can be dealt with from a separate personal communicator 1, hence a large number of end users with personal communicator 1 can be dealt with.

[0051] As described above, the present invention is not limited to such embodiments and as long as it does not deviate from the gist of the present invention, it can be executed using various modes. For instance, in the above described embodiment, as shown in figure 1, it was explained that the personal communicator 1 itself comprises a monitor 16 and a speaker 13 internally but this is not limited to this, and this can be designed to be connected to the external monitor and speaker. For instance, it can be designed to be connected to the TV receiver so that the images and audio can be outputted from the TV receiver. Moreover, in this case, a small display is provided in the personal communicator 1 and the selection screen shown in figure 4 and figure 5 can be displayed in its display.

[0052] In addition, the transmission paths 200 can adopt coaxial cables and the like of the cable TV system that are already set up, and as the other data base shown in figure 2, including the satellite TV programs, video programs by video disks or radio programs, this can be built as a multimedia interactive communication system. The personal communicator 1 in this distribution center can be arranged at each home, or each room in a hotel, enabling various applications.

[0053]

[Effect of the invention] As described above, according to the software distribution system using the said communicator, if the user transmits a desired game or karaoke request to the distribution center by the communicator, the corresponding game information or karaoke information is returned from the distribution center, hence one can play a desired game or karaoke without owning data medium such as a game cassette in case of a game and a video disk in case of karaoke. Moreover, the transmitted game or karaoke information is temporarily stored in the input data temporary memory means of the communicator, hence once transmitted, the same game or karaoke request from the separate communicator can be dealt with, thus a large number of end users with a communicator can be dealt with.

[0054] Furthermore, in case of games, it is designed to erase the game information temporarily stored in a specified time after transmission, hence in case the billing distribution system is built, on the transmission side, the once transmitted game information cannot be used arbitrarily without being transmitted from the distribution center, thus offering relief.

[Brief description of drawings]

Figure 1 is a block diagram a personal communicator according to one embodiment of the present invention

Figure 2 is a block diagram of a software distribution system using the said personal communicator

Figure 3 is a flowchart to call a distribution center

Figure 4 is an explanation drawing showing a display of individual process images.

Figure 5 is an explanation drawing showing a game number list display.

Figure 6 is a flow chart showing the processing executed at the personal communicator when a game is requested.

Figure 7 is a flowchart showing the game information automatic erasure process.

[Explanation of symbols]

1	personal communicator		
3	terminal modem	4	timer
3a	modulator - demodulator		
3b	video tuner		
5	CPU	6	input device
7	ROM	8	memory
9	video image circuit	10	audio source
11	audio amplifier		
13	Speaker		
15	image synthesis circuit	16	monitor
21			
23	microphone connector		
25	data input output control unit		
31	Control unit	33	microphone
37	data output cable		
40	printer	41	personal computer
100	distribution center	101	Game software data base
103	karaoke data base	105	other data base
111	game information transmitter	113	karaoke information transmitter
115	other information transmitter		
120	control unit		
130	head end		
200	transmission paths		
301	instruction	303	operation list
305	first game number column	311	audio amplifier
313	display part	315	second game number input column
317	explanation column		

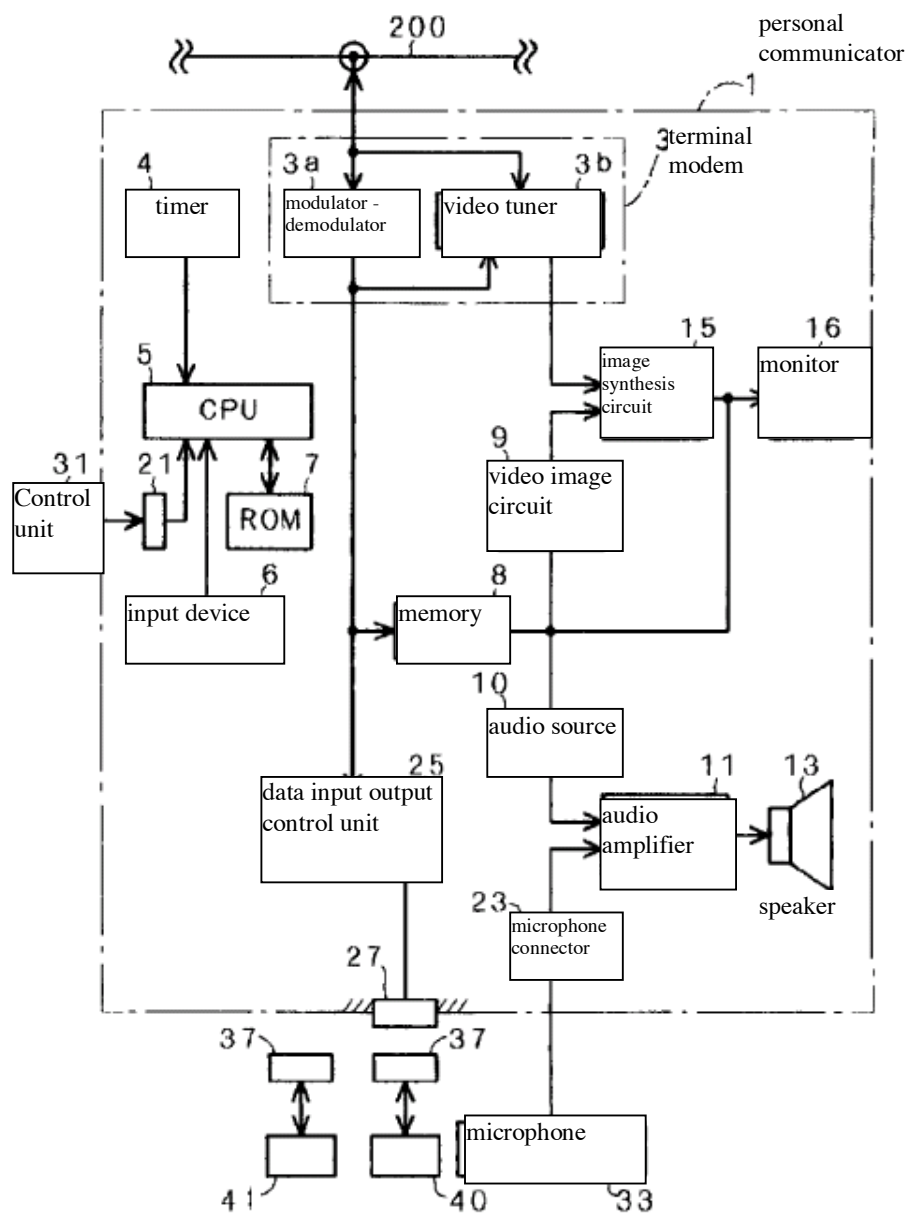


Fig. 1

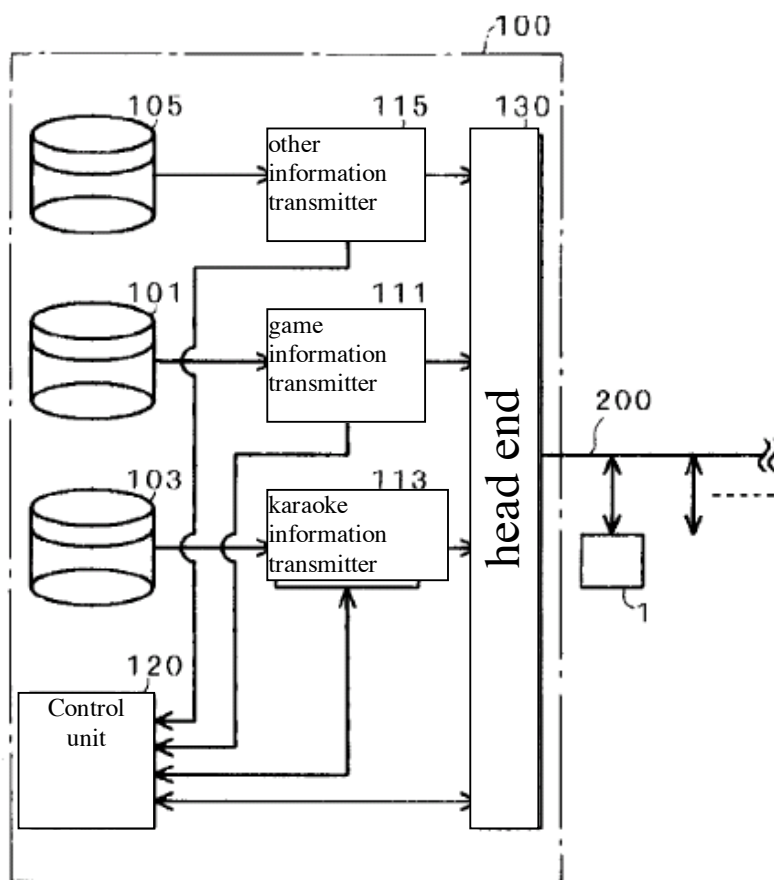


Fig. 2

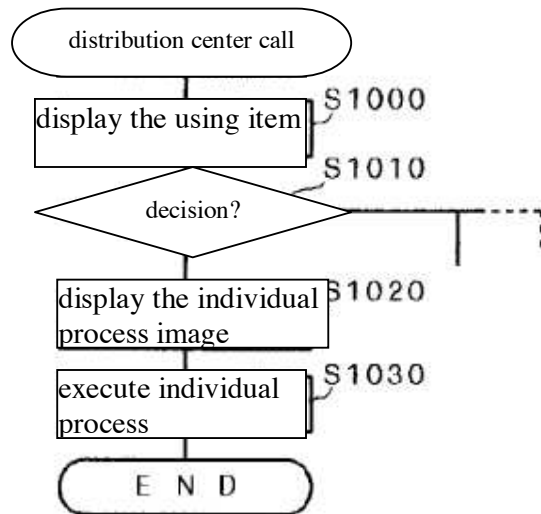


Fig. 3

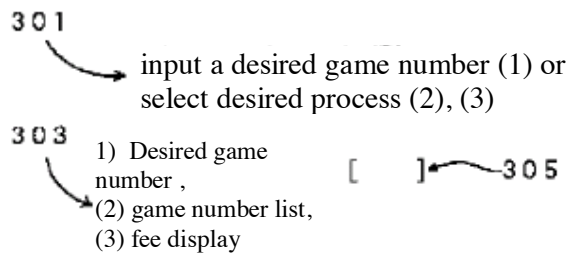


Fig. 4

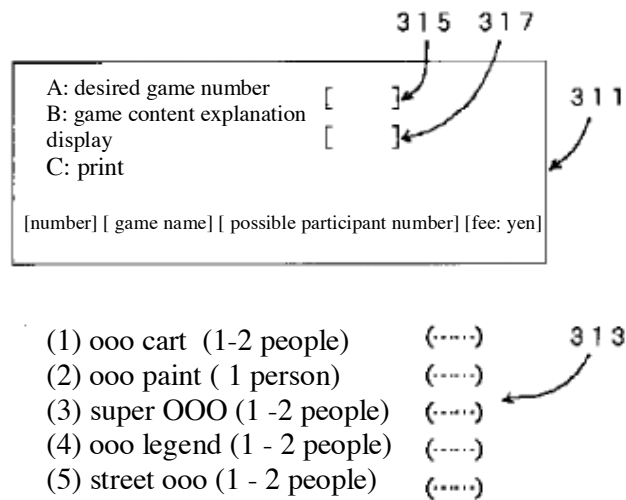


Fig 5

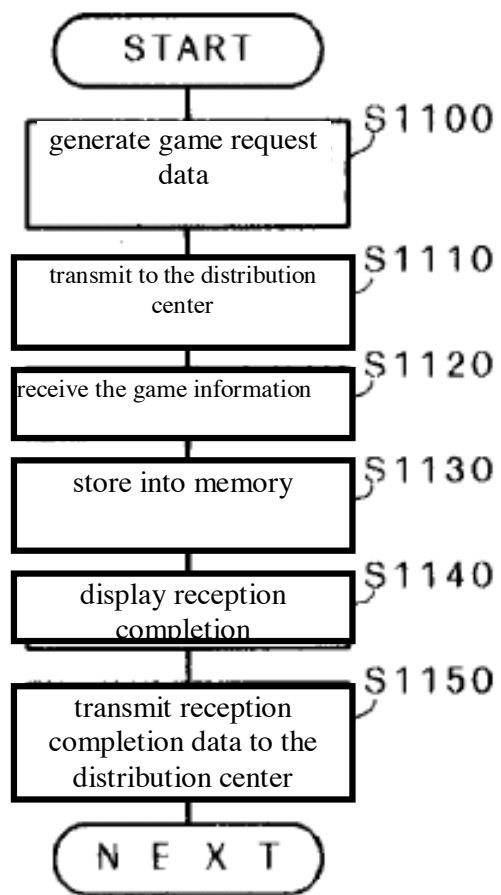


Fig 6

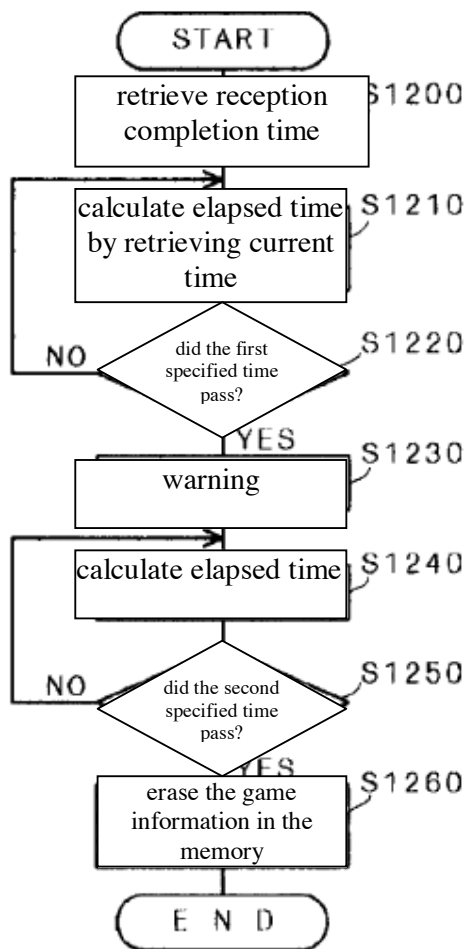


Fig. 7