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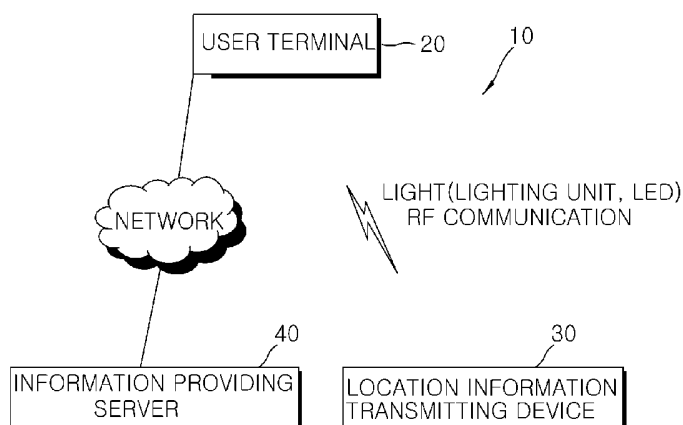
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(54) Title: SYSTEM AND ITS METHOD FOR GUIDING VOICE INFORMATION BY PLAYING CONTENTS FILE IN USER'S TERMINAL



(57) Abstract: Disclosed herein is a system and method for providing voice guidance information related to a moving location of a user by playing a contents file back from the user terminal when transmitting location information corresponding to a unique code of a specific contents file to the user terminal from a location information transmitting device. The voice guidance system for providing a voice guidance to a user terminal by playing a contents file back, includes: a location information transmitting device selected from a unique code transmitter which is installed in a specific place and transmits location information to the user terminal or from a global positioning system (GPS); an information providing server for providing at least one contents file assigned with a unique code, when receiving a request for download through a wired/wireless network from the user terminal; and the user terminal for receiving the contents file from the information providing server through the wired/wireless network to store the received contents file in an internal memory, and when receiving location information of the user terminal from the location information transmitting device, selecting a contents file assigned with a unique code corresponding to the location information from the internal memory to play the contents file back with voice.



WO 2006/028354 A1



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Description

SYSTEM AND ITS METHOD FOR GUIDING VOICE INFORMATION BY PLAYING CONTENTS FILE IN USER'S TERMINAL

Technical Field

- [1] The present invention relates to a voice guidance system and method using a playback of a contents file stored in user's terminal. In particular, the present invention relates to a system and method for storing a voice contents guidance file in a portable user terminal, and providing voice guidance information related to a moving location of the user terminal by playing the contents file back from the user terminal when transmitting location information corresponding to a unique code of a specific contents file to the user terminal from a location information transmitting device selected from a transmitter installed at any place or a GPS (Global Positioning Satellite).

[2]

Background Art

- [3] Information is conveyed by a one-sided intention of an information provider like a commercial advertisement, but it is also provided by an active intention of an information receiver to receive it.
- [4] An example of being willing to actively receive information is a case where when a person visits a museum or an exhibition place and wishes to get detailed information on objects to be viewed. A similar example is a case where a person visits a specific place such as a public office, a hospital, buildings etc.
- [5] Especially, if a visitor who arrives at such a place requests an information provider to provide guidance for him or her or asks a question, the information provider has to respond to the request or question repeatedly and individually.
- [6] For example, in an exhibition place, a guide explains about objects that are displayed, and when a visitor enters a specific room, he or she should listen to a guidance explanation through a speaker. However, if the guide leaves the place for a moment or if there are many visitors, it is difficult to listen to the guidance explanation.
- [7] In order to avoid a direct explanation by the information provider, an automatic voice guidance system is provided so that a visitor wears a headphone and listens to the guidance explanation through the operation of a switch. However, while other visitors listen to the explanation from the system, the next visitors should wait. Moreover, since many people use the system for a short time, the system is easily damaged and does not perform its function.

- [8] Meanwhile, Korean Patent Laid-Open Publication No. 2003-34824 discloses a handheld apparatus for announcing guide information in which a flash memory for storing information about works on exhibition in a museum or art gallery is connected to a connector of the handheld apparatus in order to provide information. Korean Patent Laid-Open Publication No. 2001-39540 discloses a portable automatic guidance system using radio frequency and infrared rays in which recorded guidance information is automatically provided when a visitor arrives at a place where radio frequency and infrared ray signals are sent. Korean Patent Laid-Open Publication No. 1998-82034 discloses a voice guidance system in which a data communication part is provided to connect a personal computer (PC) with the voice guidance system and a user receives data from the PC if necessary. However, the above voice guidance systems have shortcomings in that a user should passively receive information which is made and selected by an information provider. Further, due to limitation of information the user is not motivated to purchase the system, therefore the system provided by a museum or an art gallery must be rented. Moreover, the user suffers from an inconvenience having to pay the rental fees and undergo a procedure of identification confirmation. Furthermore, since the voice guidance system stores a voice file of which storage file size is big, the cost of the product is raised. In addition, since those systems are used only in a specific area such as museums, art galleries, etc., users are reluctant to buy the systems and the systems are not universally used.

[9]

Disclosure of Invention

Technical Problem

- [10] Therefore, the present invention has been made to solve the above-mentioned problems occurring in the prior art, and it is an object of the present invention to provide a voice guidance system and method in which a user with a user terminal receives a desired contents file by accessing an information providing server on the Internet and stores it in the user terminal, and if the user moves within a transmitting signal range of a transmitter or within a specific area previously set by an information provider, the user terminal receiving a unique code through a radio signal from a transmitter transmitting a unique code corresponding to a contents file of the specific area or from a location information transmitting device of a GPS plays the contents file corresponding to the unique code back to provide voice guidance to the user.
- [11] It is another object of the present invention to provide a location guidance system which can confirm objects or location while a blind person walks.

[12]

Technical Solution

- [13] To accomplish the above objects, according to an aspect of the present invention, there is provided a voice guidance system for providing a voice guidance to a user terminal by playing a contents file back, including a location information transmitting device selected from a unique code transmitter which is installed in a specific place and transmits location information to the user terminal or from a global positioning system (GPS), an information providing server for providing at least one contents file assigned with a unique code, when receiving a request for download through a wired/wireless network from the user terminal, and the user terminal for receiving the contents file from the information providing server through the wired/wireless network to store the contents file in an internal memory, and when receiving location information of the user terminal from the location information transmitting device, selecting a contents file assigned with a unique code corresponding to the location information from the internal memory to play the contents file back with voice.
- [14] Preferably, the user terminal includes a receiving sensor for receiving location information through a radio signal from the location information transmitting device, a memory for receiving the contents file stored in the information providing server through a universal serial bus (USB) access or a wired/wireless Internet access and storing the contents file, a voice playback section including a digital-to-analog converter, an amplifier and a speaker so that the contents file is played back with voice, and a central processing unit for controlling the receiving sensor, the memory and the voice playback unit, and searching the contents file assigned with a unique code corresponding to the location information received by the receiving sensor from the memory to play the contents file back.
- [15] The user terminal is an independent device or is embodied in a portable terminal selected from a GPS receiver, a notebook computer, a personal data assistant (PDA) or an MP3 player, and downloads the contents file from the information providing server through a wired/wireless network or wireless Internet access using the portable terminal.
- [16] The receiving sensor included in the portable terminal is equipped in a separate receiving device and the voice guidance system further includes a communication earphone device including an earphone, and connection means which is selected from an USB plug or a connector, connects the earphone to the receiving device, and causes the earphone to perform a playback of general voice information or voice information into which a contents file related to location information of the portable terminal is converted.
- [17] The unique code transmitter includes a power supply including an adapter for receiving a power source from power supplying means selected from a solar cell, a battery or a commercial power supply, a code generator for storing the unique code,

and a transmitter for transmitting the unique code stored in the code generator to the user terminal by using a lighting unit, a light emitting diode (LED) or radio frequency communication.

[18] According to another aspect of the present invention, there is provided a method for providing a voice guidance through a playback of a contents file in a user terminal carried by a user who is moving to a specific location, including the steps of: (10) allowing an information providing server to store a contents file, which is made in several languages and is assigned with a unique code, in a database, and uploading contents file information in a home page; (20) upon the receipt of an access request from the user terminal, allowing the information providing server to transmit a corresponding contents file requested by the user terminal to the user terminal; (30) allowing the user terminal to receive the contents file from the information providing server to store the received contents file in an internal memory, and to wait for a location information transmitting signal from a location information transmitting device selected from a unique code transmitter or a GPS; and (40) upon the receipt of the location information through a radio signal from the location information transmitting device, allowing the user terminal to search a contents file corresponding to the location information from the memory to provide voice guidance to a user through sound playback.

[19] Preferably, the step (40) further includes the steps of: (41) allowing the user terminal to receive the unique code or location information from the location information transmitting device through a radio signal; (42) allowing the user terminal to extract the unique code or the location information from the radio signal, convert the location information into a unique code assigned to a divided location region, and search a contents file corresponding to the unique code from the memory; (43) allowing the user terminal to convert digital data of the contents file into an analog signal; (44) allowing the user terminal to amplify the converted analog signal; and (45) allowing the user terminal to output the contents file with voice through a speaker.

[20]

Brief Description of the Drawings

[21] Further objects and advantages of the invention can be more fully understood from the following detailed description taken in conjunction with the accompanying drawings in which:

[22] FIG. 1 illustrates a schematic configuration of a voice guidance system according to a preferred embodiment of the present invention;

[23] FIG. 2 is a block diagram of a user terminal and a location information transmitting device according to a preferred embodiment of the present invention;

- [24] FIG. 3 illustrates a configuration of a user terminal according to a preferred embodiment of the present invention;
- [25] FIG. 4 illustrates a configuration of a unique code generator according to a preferred embodiment of the present invention;
- [26] FIG. 5 is a perspective view illustrating the external appearance of an earphone device according to the present invention;
- [27] FIG. 6 illustrates another connection means of the earphone device according to the present invention;
- [28] FIGs. 7 and 8 illustrate schematic configurations of the earphone device according to the present invention;
- [29] FIG. 9 is a flow chart illustrating a procedure of providing location information according to a preferred embodiment of the present invention; and
- [30] FIG. 10 is a detailed flow chart illustrating a voice guiding step of a user terminal according to a preferred embodiment of the present invention.

[31]

Best Mode for Carrying Out the Invention

- [32] Reference will now be made in detail to the present preferred embodiments of the invention, examples of which are illustrated in the accompanying drawings.
- [33] FIG. 1 illustrates a schematic configuration of a voice guidance system 10 according to a preferred embodiment of the present invention. The voice guidance system 10 includes a user terminal 20, a location information transmitting device 30 and an information providing server 40.
- [34] Although the user terminal 20 may be independently equipped as a terminal carried by a user, it includes an information communication terminal having a function of the user terminal 20, such as a notebook computer, a personal data assistant (PDA), a cellular phone, a GPS terminal, a digital camera, an MP3 player, and a combination device of these terminals. The user terminal 20 has a network communication function and receives a voice guidance contents file related to a specific location from the information providing server 40. A unique code corresponding to an identification of the file is assigned to the contents file, together with voice data information.
- [35] The location information transmitting device 30 includes a unique code transmitter installed directly by an information provider and a GPS. The unique code transmitter transmits a radio signal to a user terminal of a near distance by using light (a lighting unit or light emitting diode (LED)) or a radio frequency (RF) communication function. The radio signal includes the unique code of the contents file. Accordingly, if a user with the user terminal 20 moves to an area where the unique code transmitter is installed and if the area is within a transmitting signal range of the unique code

transmitter, the user terminal 20 receives a unique code through the radio signal from the unique code transmitter. When receiving the unique code, the user terminal 20 searches a contents file corresponding to the unique code from a memory and automatically plays the contents file back to provide voice guidance to the user.

[36] If the location information transmitting device 30 is a GPS, the information provider causes the user to download a location information code conversion program from the information providing server so that the user terminal 20 is equipped with the program. The location information code conversion program is to convert location information detected from the GPS received within a previously divided specific area having an assigned unique code into the assigned code. It is preferable that a GPS location data receiving apparatus is a combined device with a cellular phone, etc. It is also preferable that the user terminal can simultaneously receive location information from both the unique code transmitter and the GPS.

[37] The information providing server 40 stores in a database a contents file to guide the user in a specific area and the code conversion program of the GPS location information. Upon the receipt of a request for a wired/wireless network access from the user terminal 20, the information providing server 40 provides the contents file requested by the user.

[38] The contents file is not restrict to explanation for objects that are displayed in a specific exhibition district such as an art gallery or a museum but it includes regional information as well on a visiting region, thereby consulting the convenience of the terminal user visiting a specific region.

[39] The regional information can be, for example, location information of roads to a museum, regional information on convenient facilities such as restaurants or department stores around the museum, information on menus or prices provided by corresponding convenient facilities, information on floors, departments, resident companies, etc. of each building. Enterprises and public offices of a visiting region can have the impact of their advertisements and guidance by installing the location information transmitting device 30 for transmitting a code corresponding to the regional information or by providing the regional information related to the GPS location information to an information provider. Since the information provider provides a contents file including corresponding advertisement information to a terminal user, the information provider can get an advertising fee from the enterprise installing the transmitting device and keep a continuous information providing business. Moreover, the above-mentioned information can contribute to ensuring the mobility of the entire users including blind persons.

[40] For instance, if a user is to visit an art gallery in a specific region, the user accesses the information providing server 40 through the Internet using a PC, searches the art

gallery or the visiting region, requests the information providing server to send a contents file, including information on works on exhibition of the corresponding art gallery, convenient facilities around the gallery and roads to the gallery, or unique code conversion data of GPS location information, and downloads the contents file through USB (Universal Serial Bus) communication from the PC. The information providing server 40 transmits the contents file to the user terminal and the transmitted contents file is stored in an internal memory of the user terminal. Meanwhile, if the user should move to another region by changing his plan, he can download a new contents file by accessing the information providing server 40 by the use of a public Internet service or a PC installed in the entrance of an exhibition place or building.

[41] While the user travels to the art gallery, unique code information received from the location information transmitting device 30 installed in a traveling location and unique code information converted from location information detected from the GPS are transmitted to the user terminal, and a contents file having a corresponding code value included in the user terminal is converted into a voice file to be provided to the user. Therefore, the user can move to the art gallery while listening to information on restaurants for example, around the art gallery, and thus it is convenient for the user to make a plan after seeing the exhibition.

[42] When the terminal user arrives at the art gallery and starts to see works on exhibition, if it is assumed that the unique code transmitter 30 is installed at every exhibition works displayed in the art gallery, the user terminal receives a unique code through a radio signal from the unique code transmitter 30 assigned to each work and plays a corresponding contents file back by using the received unique code whenever the user moves to see a corresponding work. Therefore, the user can listen to detailed information on the currently seeing art work through earphones. If the location information is received by the GPS, the user terminal receives detailed location information by using a communication tool such as blue-tooth within a building and plays the contents file corresponding to the unique code back.

[43] Therefore, the present invention can provide guidance services in exhibition places, museums, sightseeing places, etc. by establishing the contents file and provide regional information, guidance information, advertisement information, etc. by the unique code transmitter 30 or the GPS even in any places such as public offices, department stores, hospitals, schools, buildings, etc.

[44] FIG. 2 illustrates a schematic configuration of a user terminal and a location information transmitting device according to a preferred embodiment of the present invention.

[45] The user terminal 20 includes a central processing unit (CPU) 21, a receiving sensor 22, a memory 23, and a voice playback unit 24. The CPU 21 controls all resources of

the user terminal 20 and performs a voice guidance function. If the receiving sensor 22 receives a transmitting signal from the location information transmitting device 30, the CPU 21 extracts a unique code from the received radio signal. The CPU 21 searches a corresponding contents file from the memory 23 by using the extracted unique code and causes the voice playback unit 24 to play the contents file back.

[46] The unique code transmitter 30 includes a power supply 31, a code generator 32, and a transmitter 33. The power supply 31 supplies a power source to the unique code transmitter 30. The code generator 32 stores unique codes corresponding to contents files set by the information provider. The transmitter 33 transmits a radio signal including a unique code to the user terminal 20.

[47] FIG. 3 illustrates an internal configuration of the user terminal 20 according to a preferred embodiment of the present invention. The configuration of FIG. 3 shows a terminal for voice guidance only. In FIG. 3, a configuration of communicating with an external network is omitted and the user terminal 20 receives a contents file through a USB 25.

[48] The configuration of FIG. 3 is preferably used when the information provider connects the user terminal 20 to a PC, receives a contents file through the USB 25, stores the contents file in an external ROM (Read Only Memory) 231, and provides the user terminal 20 to a visiting user.

[49] If the sensor 22 receives a radio signal, the CPU 21 extracts a unique code, reads a contents file from the external ROM 231, stores the contents file in an internal ROM 232, and controls a playback of the contents file.

[50] A digital-to-analog (D/A) converter 241 converts the digital contents file stored in the internal ROM 232 into analog data. If an amplifier 242 receives the analog data and amplifies the received analog data, voice guidance information is transmitted to the user through a speaker 243.

[51] FIG. 4 illustrates an internal configuration of the unique code generator 30 according to a preferred embodiment of the present invention.

[52] The unique code transmitter 30 receives a power source through a solar cell, a battery or an adapter. The supplied power source causes the unique code transmitter 30 to continue to send a transmitting signal. The code generator 32 stores unique codes and periodically generates the transmitting signal according to a control signal of a timer 321. The unique code generated from the code generator 32 is converted into a radio signal format through a driver 322 and transmitted as a radio signal to the exterior through a sensor 33 which is the transmitter.

[53] FIG. 5 is a perspective view illustrating the external appearance of an earphone device for communication according to the present invention, and FIG. 6 illustrates another connection means of the earphone device according to the present invention.

FIGs. 7 and 8 illustrate schematic configurations of the earphone device according to the present invention.

[54] The earphone device for communication according to the present invention includes earphones 50, a receiving device 60, and connection means 70.

[55] Since the earphones 50 are connected by the connection means 70 to a portable terminal 80 selected from a cellular phone, PDA, MP3 player each having an amplifier 81, the earphones 50 generate general voice information such as music, or a voice call in case of the cellular phone. If the portable terminal 80 possessed by a user is located in a specific area, the earphones 50 generate voice information playing a contents file including regional location information or related contents back by the portable terminal 80.

[56] The portable terminal 80 is carried by the user and includes a terminal having a terminal function in an information communication terminal such as a PDA, cellular phone, MP3 player, etc. Since the portable terminal 80 has a network communication function, it receives a voice guidance contents file related to a specific location from the information providing server. A unique code corresponding to an identification of a file is assigned to this contents file, together with voice data information.

[57] The receiving device 60 connected to the earphones 50 receives general voice information and location information according to the location of the portable terminal 80 possessed by the user through the location information receiving sensor 22, and transmits the location information to the portable terminal 80. Further, the receiving device 60 causes a contents file converted into voice information through the portable terminal 80 to be played back through the earphones 50. The receiving device 60 includes switch means 61 for selectively generating either voice information into which the contents file is converted or general voice information.

[58] Although the above voice guidance system can be used in regions other than a specific region, it has a shortcoming in that it should be connected to a PC, etc. in order to receive the contents file. Accordingly, a voice guidance system has been proposed which is easy to use and convenient to carry.

[59] The location information may be a unique code itself when it is received from the unique code transmitter 30 but if the location information is received from the GPS, all the location information received from specific locations to which unique codes are assigned is identically converted into unique codes assigned to the specific locations.

[60] It is preferable that the receiving device 60 includes a necklace 64 combined therewith so that it is easy to carry the portable terminal 80. It is also preferable that the receiving device 60 includes a microphone 63 for transmitting user's voice to the portable terminal 80. The microphone 63 employs a configuration of a typical microphone used in a cellular phone.

- [61] The receiving sensor 22 detects the location of the user positioned in a specific area, and receives location information from the unique code transmitter 30 installed directly by the information provider or the GPS. The unique code transmitter 30 sends a radio signal to the portable terminal 80 of a near distance by using light (lighting unit, LED) or RF communication function. The radio signal includes a unique code of a contents file. Therefore, if the user with the portable terminal 80 moves to an area where the unique code transmitter 30 is installed, and if the area is within a transmitting signal range of the unique code transmitter 30, the portable terminal 80 receives a unique code through the radio signal from the unique code transmitter 30. When receiving the unique code, the portable terminal 80 searches a contents file corresponding to the unique code and provides voice guidance to the user by automatically playing the contents file back through the earphones 50.
- [62] The contents file includes explanation for works on exhibition in a specific exhibition area such as an art gallery or museum, or regional information on a visiting region, thereby consulting the convenience of the terminal user visiting a specific region. The regional information is, for example, location information of roads to a museum, information on convenient facilities such as restaurants or department stores around the museum, information on menus or prices provided by corresponding convenient facilities, information on floors, departments, resident companies, etc. of each building. The above-mentioned information can contribute to ensuring the mobility of the entire users including blind persons.
- [63] While the user with the portable terminal 80 moves to a specific location, unique code information received from the unique code transmitter 30 and unique code information converted from the location information detected from the GPS are received by the location information receiving sensor 22 of the receiving device 60, and a contents file having a corresponding code value included in the portable terminal 80 is converted into a voice file. Therefore, since the user can move to the specific location while listening to information on, for example, restaurants around the destination, it is convenient for the user to make a plan to do in the specific location.
- [64] Therefore, according to the present invention, a user can get guide contents through voice information in exhibition places, museums, sightseeing places, etc. by the contents file. Moreover, a user who is in a specific area can receive regional information, guidance information, advertisement information, etc. on public offices, department stores, hospitals, schools, buildings, etc.
- [65] The connection means 70 connects the portable terminal 80 carried by the user to the receiving device 60. The connection means 70 causes voice information into which a contents file related to location information of the portable terminal 80 is converted to be played back through the earphones 50 or to generate general voice information

through the earphones 50. The connection means 70 may be a USB plug 71 or a connector 72. The connection means 70 causes the receiving device 60 to receive a power source through the portable terminal 80. Alternatively, the receiving device 60 may include a separate power supply 62. FIG. 7 shows an example that the separate power supply 62 is used. FIG. 8 shows an example where the power source of the portable terminal 80 is used.

[66] FIG. 9 is a flow chart illustrating a procedure of providing location information according to a preferred embodiment of the present invention.

[67] In a homepage establishing step (S10) for providing a contents file, the information providing server 40 stores the contents file in a database and uploads contents file information on a home page. It is possible that the contents file is made in several languages so that individual unique codes are assigned.

[68] In a contents file providing step (S20), the information providing server 40 transmits a corresponding contents file to the user terminal 20 upon the receipt of a request for a contents file from the user terminal 20.

[69] In a contents file receiving and standby step (S30), the user terminal 20 receives and stores the contents file in the internal memory 23 and gets ready for receiving a unique code or location information from the location information transmitting device 30.

[70] In a unique code receiving and voice guiding step (S40), the user terminal 20 receives a unique code through a radio signal from the unique code transmitter and guides the user by searching a contents file corresponding to the unique code from the memory 23. If the location information is received from the GPS, a step is added for converting the location information into a previously assigned unique code of a specific location.

[71] FIG. 10 is a detailed flow chart illustrating the unique code receiving and voice guiding step (S40) shown in FIG. 9.

[72] In a unique code receiving step (S41), the user terminal 20 receives location information through a radio signal from the location information transmitting device 30 selected from a specific unique code transmitter or GPS while the user travels.

[73] In a contents file searching step (S42), the user terminal 20 extracts a unique code from the received radio signal and searches a contents file corresponding to the unique code. If the location information is received from the GPS, a step is added for converting the location information into a previously assigned unique code of a specific location.

[74] In a D/A converting step (S43), the user terminal 20 converts the data of the contents file read from the memory 23 into an analog signal.

[75] In an analog signal amplifying step (S44), the user terminal 20 amplifies the converted analog signal.

[76] In a contents file voice guiding step (S45), the user terminal 20 transmits voice guidance information to the user through a speaker.

[77] As described above, a voice guidance system and method according to the present invention are provided by a playback of a contents file stored in a user terminal. While the present invention has been described with reference to the particular illustrative embodiments, it is not to be restricted by the embodiments but only by the appended claims. It is to be appreciated that those skilled in the art can change or modify the embodiments without departing from the scope and spirit of the present invention.

[78]

Industrial Applicability

[79] In the voice guidance system and method using a playback of the contents file stored in the user terminal according to the present invention, the information providing server transmits, by installing the unique code transmitter in a specific area or using the GPS, a unique code to the user terminal which downloads the contents file corresponding to location information from the information providing server. Therefore, the user can receive the voice guidance information provided by the information provider through the contents file played back from the user terminal while he is traveling. The inventive voice guidance system and method can be helpful to visitors including blind persons to ensure mobility. The entrepreneurs installing the transmitter can increase in sales by the impact of advertisements. The information provider can be paid for advertisement cost from a corresponding entrepreneur by continuously providing regional information related contents and ensure stable and continuous business.

[80] Moreover, since the present invention can individually provide detailed information on objects that are displayed in an exhibition place, etc. according to location information to visitors who see the objects while they are moving, it is effective in information conveyance capability.

[81] Furthermore, the voice guidance system and method can generate not only general voice information through the portable terminal but also information related to locations through earphones via the portable terminal by converting a contents file corresponding to information on a specific location received through the unique code transmitter or GPS. Since the voice guidance system is easy to carry and operate, general users and blind persons can be easily used.

Claims

- [1] A voice guidance system for providing a voice guidance to a user terminal by playing a contents file back, the voice guidance system comprising:
a location information transmitting device selected from a unique code transmitter which is installed in a specific place and transmits location information to the user terminal or from a global positioning system (GPS);
an information providing server for providing at least one contents file assigned with a unique code, when receiving a request for download through a wired/wireless network from the user terminal; and
the user terminal for receiving the contents file from the information providing server through the wired/wireless network to store the received contents file in an internal memory, and when receiving location information of the user terminal from the location information transmitting device, selecting a contents file assigned with a unique code corresponding to the location information from the internal memory to play the contents file back with voice.
- [2] The voice guidance system as claimed in claim 1, wherein the user terminal comprises:
a receiving sensor for receiving location information through a radio signal from the location information transmitting device;
a memory for receiving the contents file stored in the information providing server through a universal serial bus (USB) access or a wired/wireless Internet access and storing the contents file therein;
a voice playback unit including a digital-to-analog converter, an amplifier and a speaker so that the contents file is played back with voice; and
a central processing unit for controlling the receiving sensor, the memory and the voice playback unit, and searching the contents file assigned with a unique code corresponding to the location information received by the receiving sensor from the memory to play the contents file back.
- [3] The voice guidance system as claimed in claim 2, wherein the user terminal is an independent device or is embodied in a portable terminal selected from a GPS receiver, a notebook computer, a personal data assistant (PDA) or an MP3 player, and downloads the contents file from the information providing server through a wired/wireless network or wireless Internet access using the portable terminal.
- [4] The voice guidance system as claimed in claim 3, wherein the receiving sensor included in the portable terminal is equipped in a separate receiving device and the voice guidance system further comprises a communication earphone device

including an earphone, and connection means which is selected from an USB plug or a connector, connects the earphone to the receiving device, and causes the earphone to perform a playback of general voice information or voice information into which a contents file related to location information of the portable terminal is converted.

- [5] The voice guidance system as claimed in claim 4, wherein the receiving device includes switch means for selectively outputting general voice information or voice information into which a contents file is converted.
- [6] The voice guidance system as claimed in claim 4, wherein the receiving device includes a microphone for transmitting user voice to the portable terminal.
- [7] The voice guidance system as claimed in claim 5 or 6, wherein the receiving device includes a necklace so that a user can wear.
- [8] The voice guidance system as claimed in claim 1, wherein the unique code transmitter comprises:
 - a power supply including an adapter for receiving a power source from power supplying means selected from a solar cell, a battery or a commercial power supply;
 - a code generator for storing the unique code; and
 - a transmitter for transmitting the unique code stored in the code generator to the user terminal by using a lighting unit, a light emitting diode (LED) or radio frequency communication.
- [9] The voice guidance system as claimed in claim 1, wherein the information providing server receives an access request and a download request for the contents file from the user terminal through a home page where a web server is established, searches the contents file from a database, and provides the searched contents file to the user terminal.
- [10] The voice guidance system as claimed in claim 1, wherein the location information is a unique code which is set by an information provider and transmitted from the unique code transmitter, or in a specific location which is previously divided by the information provider and is assigned with a unique code, the location information is a unique code in which all location information detected from a GPS is identically converted into a unique code assigned to a specific location.
- [11] The voice guidance system as claimed in claim 10, wherein the contents file includes information about exhibition objects, regional information, guidance information, or advertisement information.
- [12] A method for providing a voice guidance through a playback of a contents file in a user terminal carried by a user who is moving to a specific location, the method

comprising the steps of:

(10) allowing an information providing server to store a contents file, which is made in several languages and is assigned with a unique code, in a database, and uploading contents file information in a home page;

(20) upon the receipt of an access request from the user terminal, allowing the information providing server to transmit a corresponding contents file requested by the user terminal to the user terminal;

(30) allowing the user terminal to receive the contents file from the information providing server to store the received contents file in an internal memory, and to wait for a location information transmitting signal from a location information transmitting device selected from a unique code transmitter or a GPS; and

(40) upon the receipt of the location information through a radio signal from the location information transmitting device, allowing the user terminal to search a contents file corresponding to the location information from the memory to provide voice guidance to a user through sound playback.

[13] The method as claimed in claim 12, wherein the step (40) further comprises the steps of:

(41) allowing the user terminal to receive the unique code or location information from the location information transmitting device through a radio signal;

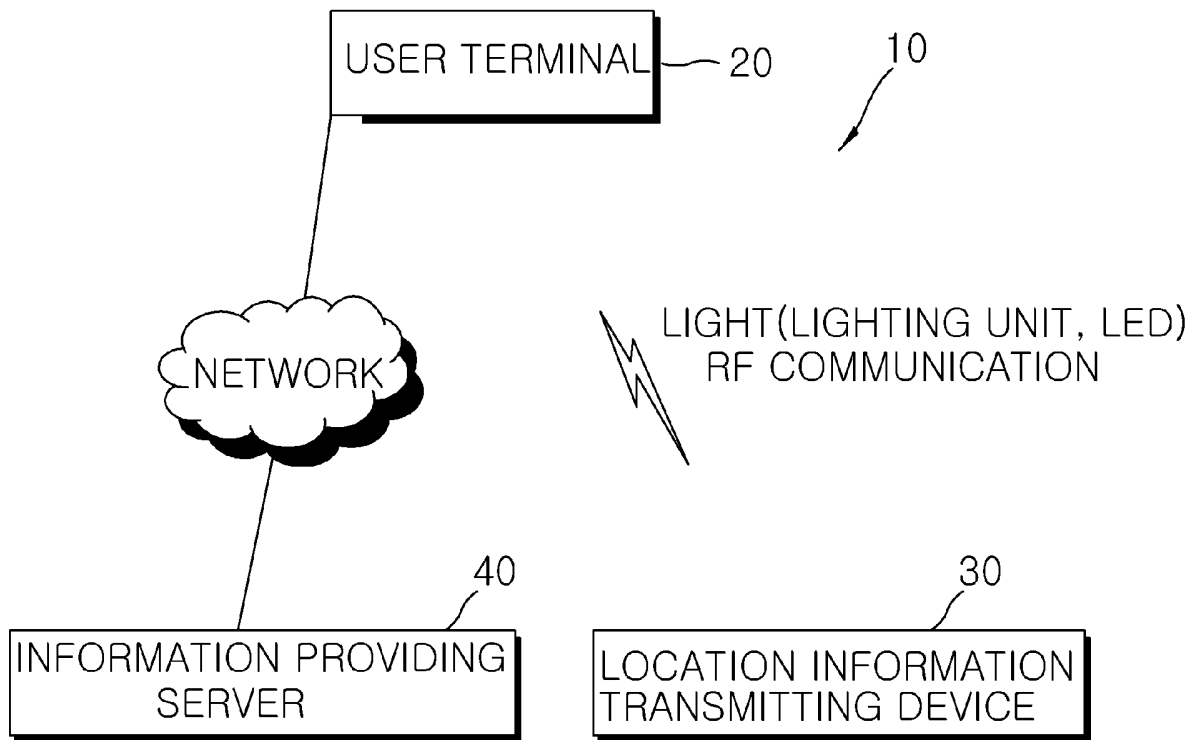
(42) allowing the user terminal to extract the unique code or the location information from the radio signal, convert the location information into a unique code assigned to a divided location region, and search a contents file corresponding to the unique code from the memory;

(43) allowing the user terminal to convert digital data of the contents file into an analog signal;

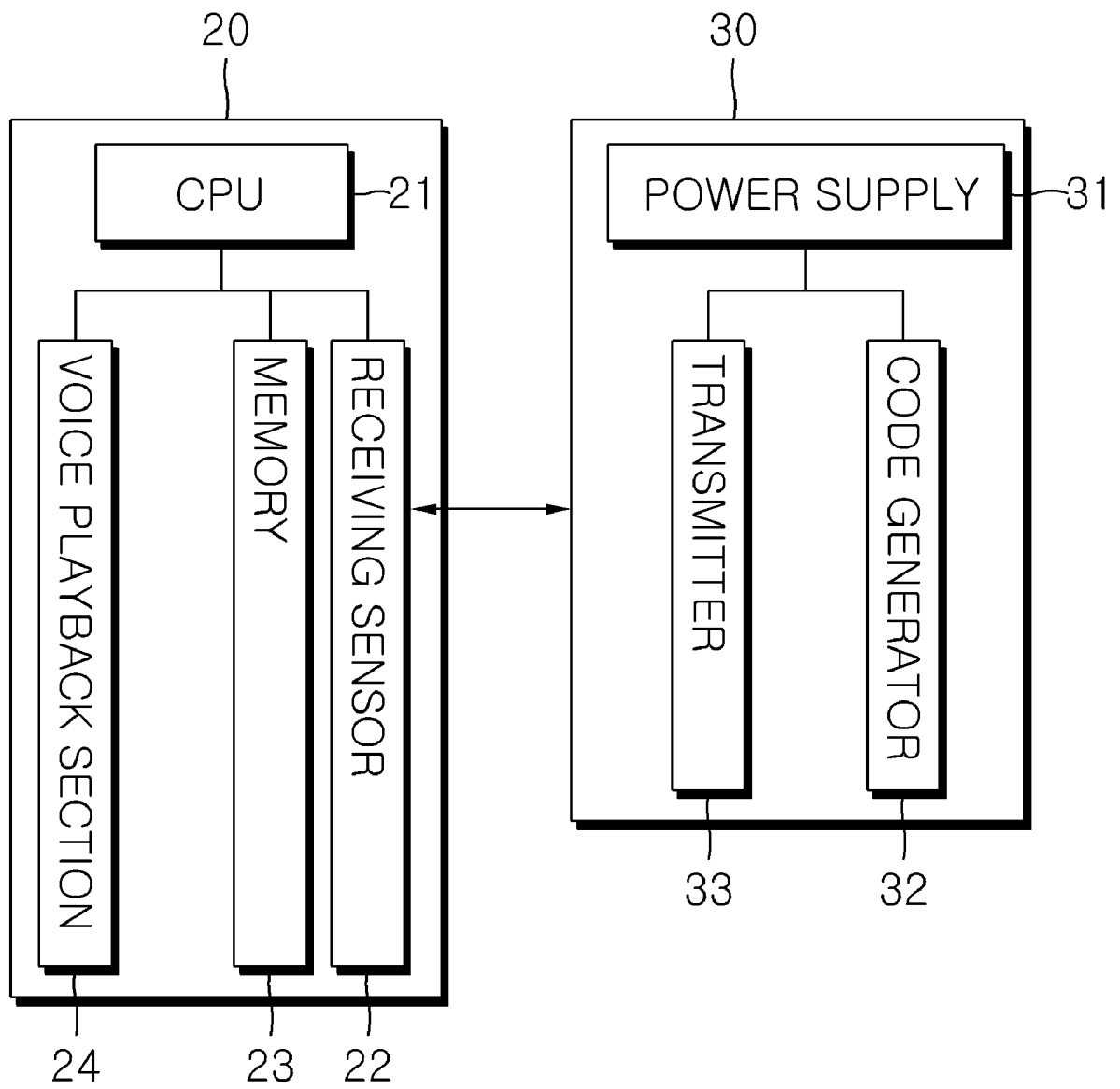
(44) allowing the user terminal to amplify the converted analog signal; and

(45) allowing the user terminal to output the contents file with voice through a speaker.

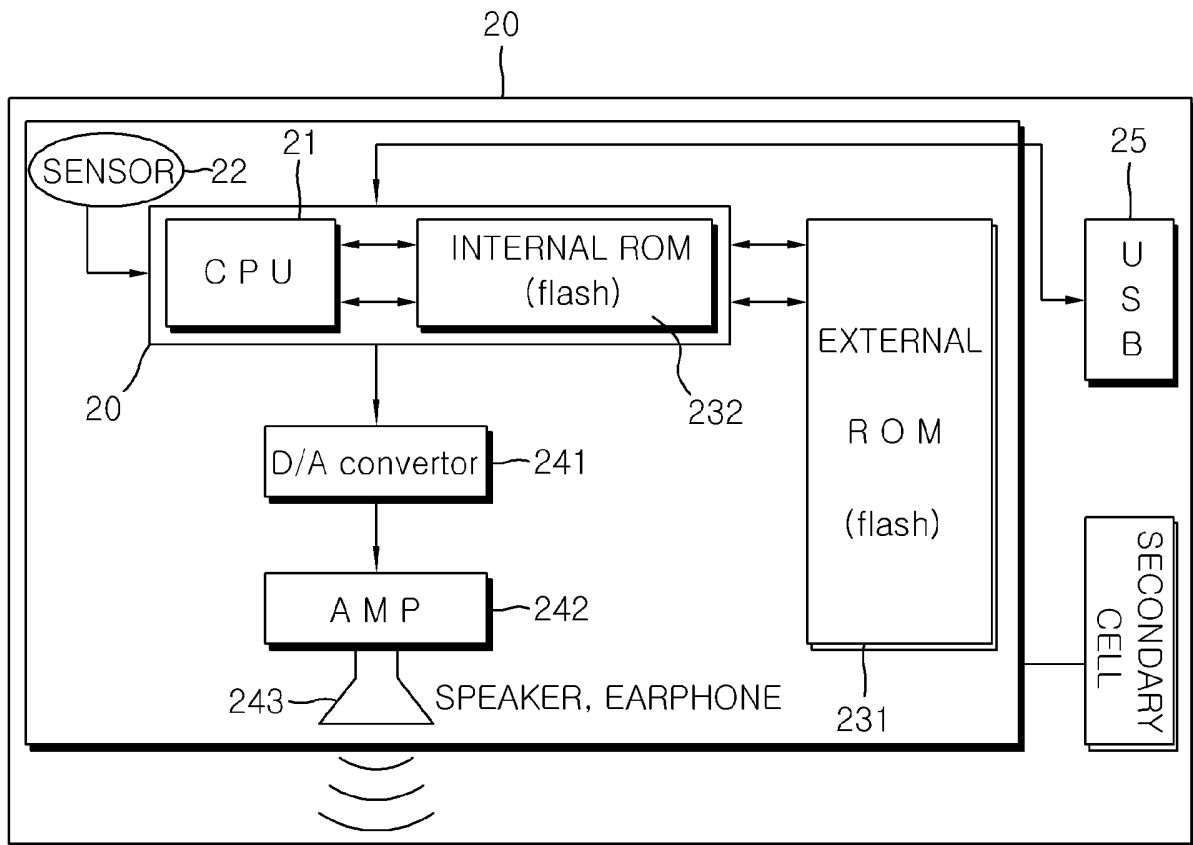
[Fig. 1]



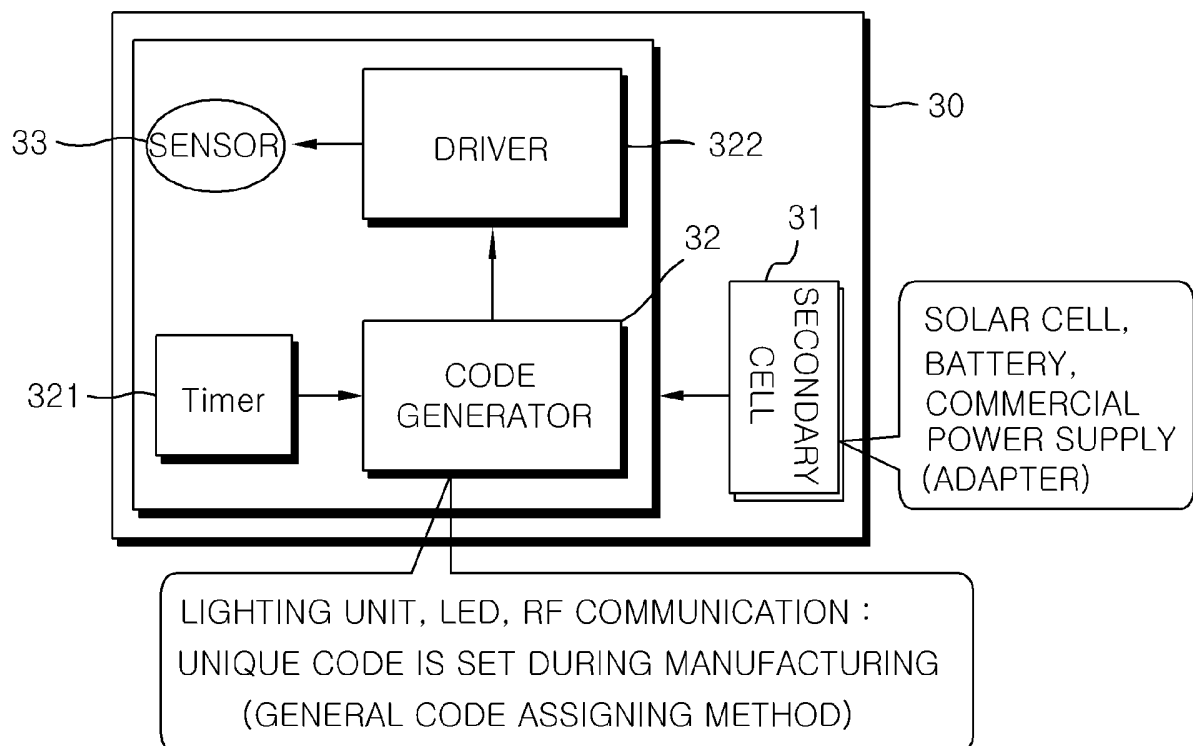
[Fig. 2]



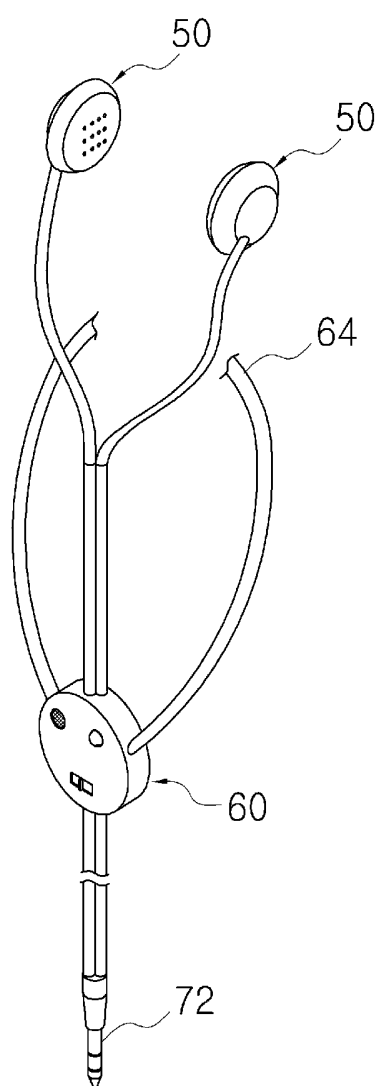
[Fig. 3]



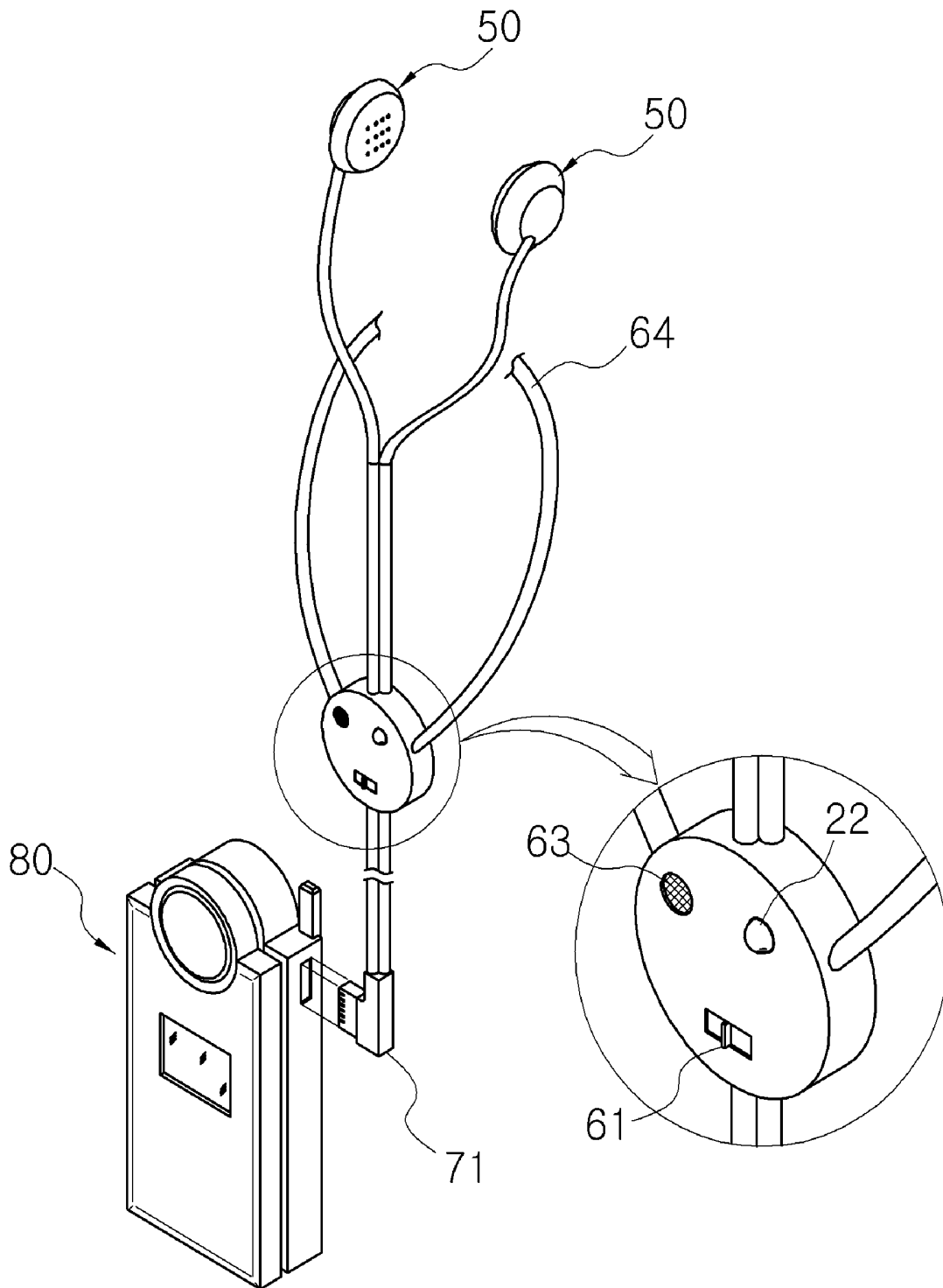
[Fig. 4]



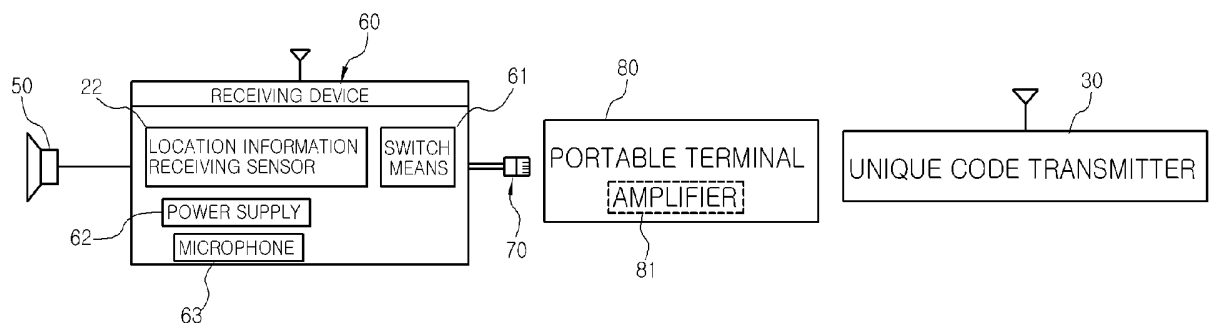
[Fig. 5]



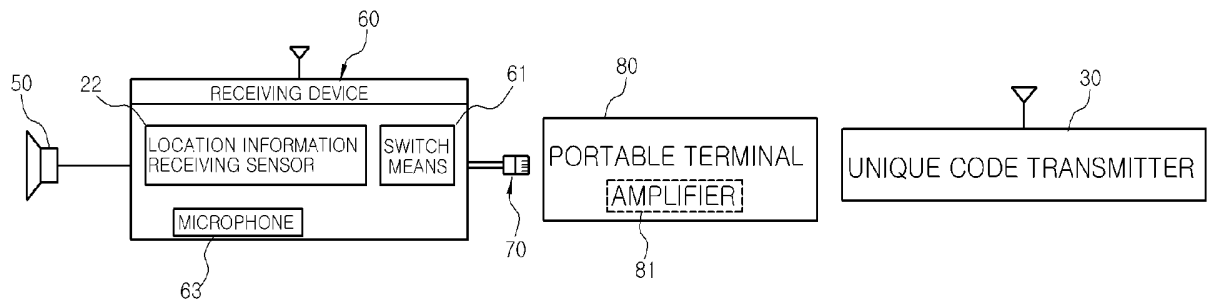
[Fig. 6]



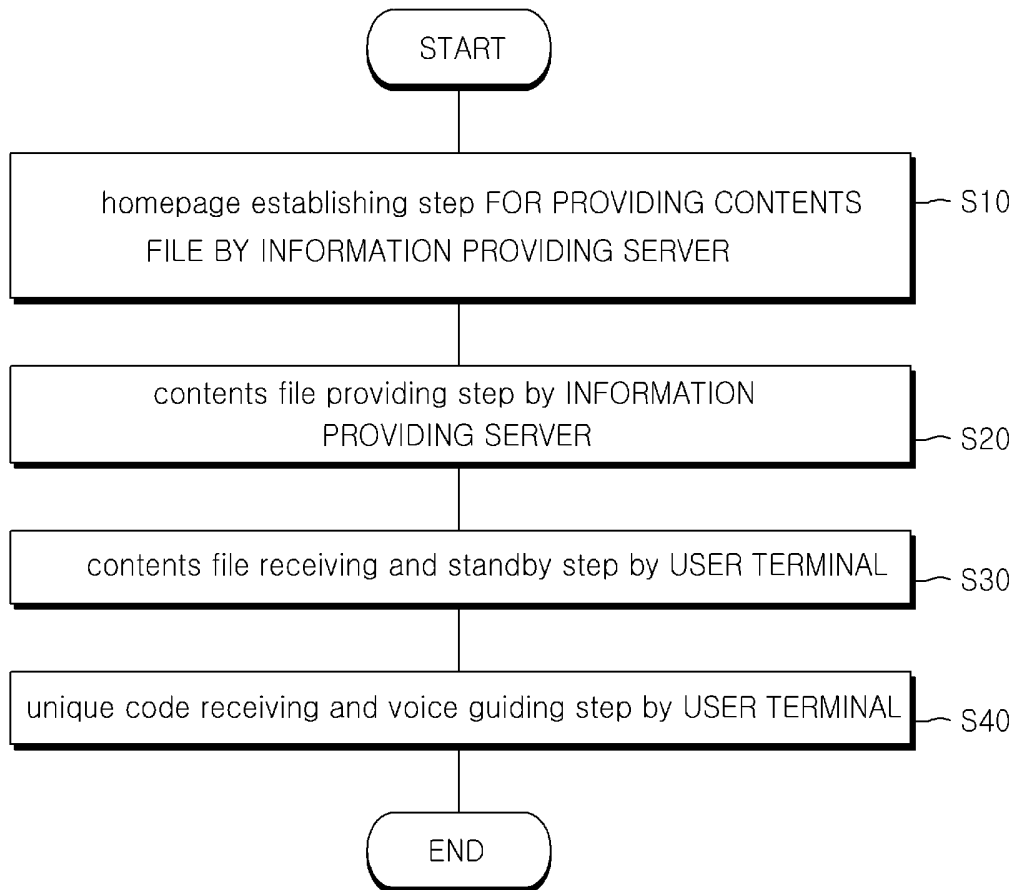
[Fig. 7]



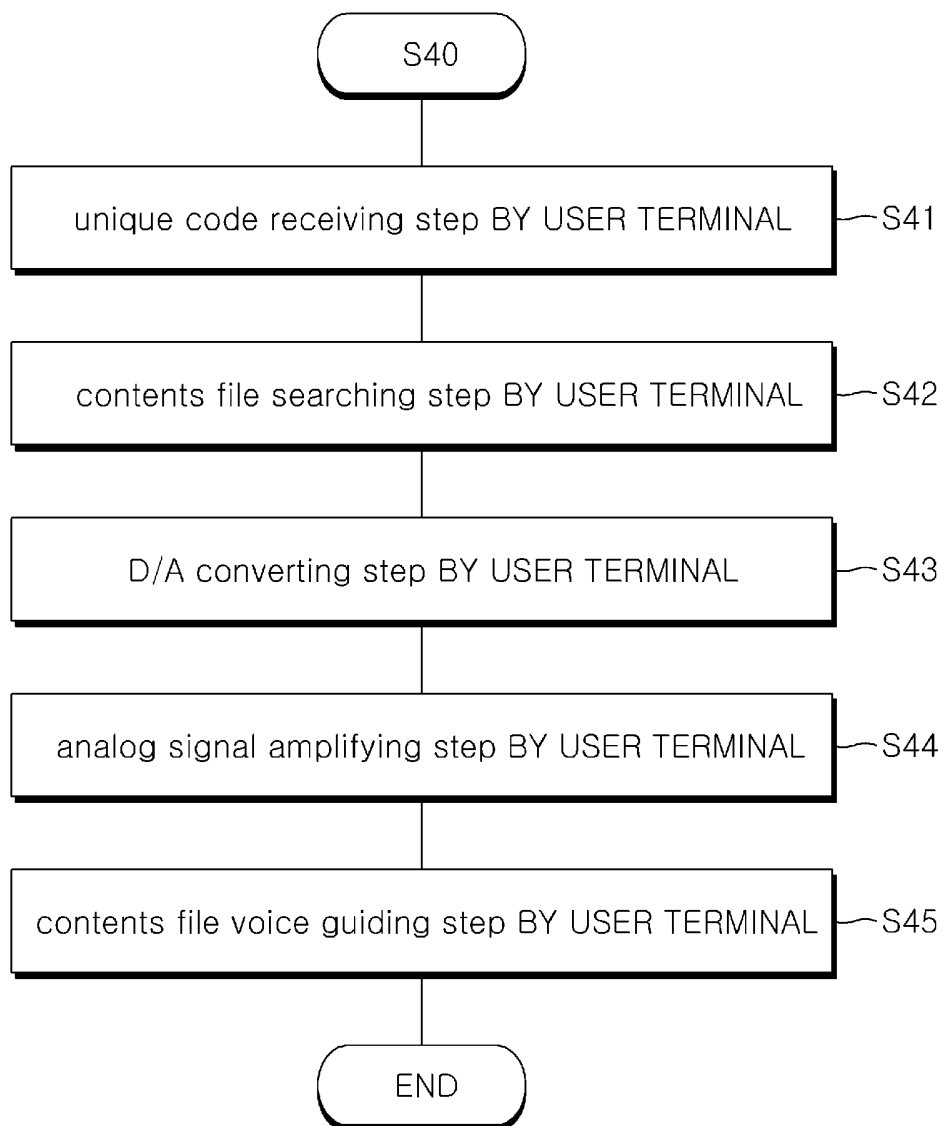
[Fig. 8]



[Fig. 9]



[Fig. 10]



INTERNATIONAL SEARCH REPORT

International application No.
PCT/KR2005/002983

A. CLASSIFICATION OF SUBJECT MATTER**IPC7 H04Q 7/24**

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7 : H04Q, H04M, G07F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

KR Patents and Utility Models since 1975

JP Utility Models since 1975

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

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C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
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Date of the actual completion of the international search

21 DECEMBER 2005 (21.12.2005)

Date of mailing of the international search report

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Information on patent family members

International application No.

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