

AUDIO CONTENT DELIVERY SERVER AND USER TERMINAL

BACKGROUND

Technical Field

[0001] The present invention relates to an audio content delivery server and a user terminal, and particularly relates to an audio content delivery server and a user terminal for delivering audio content over the Internet.

Background Art

[0002] In the related art, toys are known that give an effect as if a doll or the like is speaking. With such toys, a doll or the like is provided with a memory device therein, and audio data that has been stored in advance in the memory device is reproduced to give such an effect (e.g., see Japanese Laid-Open Patent Publication No. 2004-301942).

[0003] Further, audio content delivery servers and user terminals for delivering audio contents over the Internet are known with which audio content possessed by an audio content delivery server on the Cloud are delivered to user terminals and the audio content is selectively reproduced. For example, a game system is known that is configured to store audio content in a game server on the Cloud in advance, download the audio content to a user terminal, and selectively reproduce the audio content depending on the usage of weapons in a game (e.g., see Japanese Laid-Open Patent Publication No. 2012-217857).

SUMMARY OF THE INVENTION

Problem to Be Solved by the Invention

[0004] However, the toy disclosed in Japanese Laid-Open Patent Publication No. 2004-301942 is merely a technique of reproducing audio data that has been

stored in advance in the memory device in the doll. With such a toy, since audio data that can be reproduced are limited to those recorded in the memory device in the doll, the user might get bored of the toy.

[0005] With the game system disclosed in Japanese Laid-Open Patent Publication No. 2012-217857, upon downloading audio content via the Internet, there is limited audio content available to the users.

[0006] Therefore, it is often the case that, on a user terminal side, a downloaded audio content is modified to change the sound quality of an acoustic weapon in the game and that a voice recorded by the user with a microphone is changed to produce a comical voice for the user. In other words, the game system of Japanese Laid-Open Patent Publication No. 2012-217857 was not able to provide audio content satisfying the user due to limited types of audio content available for downloading.

[0007] It is an object of the invention to provide an audio content delivery server and a user terminal that make it possible to deliver audio content of a wide variety in a Cloud environment to thereby satisfy the needs of every user who wishes to use the audio content, as well as to make it possible for anyone to deliver various audio content in a facilitated manner.

Means to Solve the Problem

[0008] In order to achieve the above mentioned object, an audio content delivery server of the present invention which is capable of communicating with at least one user terminal over a network is characterised by comprising a server storage unit configured to store user identification information and, among a plurality of audio content data items received from a user terminal, a distributable content data item that is desired to be distributed and a non-distributable content data item that is not desired to be distributed, a sorting

section configured to set a distribution flag on the distributable content data item and a non-distribution flag on the non-distributable content data item, the distribution flag indicating that the distributable content data item is distributable, the non-distributable content flag indicating that the non-distributable content data item is not distributable, a list creating section configured to create a distribution list of distributable content data items based on the distribution flag in a case where a request from the user terminal specifies the distributable content data item and a non-distribution list of non-distributable content data items based on the non-distribution flag in a case where a request from the user terminal specifies the non-distributable content data item, and a transmitting section configured to transmit, to the user terminal, the distribution list or the non-distribution list to be displayed on the user terminal, and to transmit, to the user terminal, a distributable content data item selected by the user terminal from the distribution list or a non-distributable content data item selected by the user terminal from the non-distribution list.

[0009] According to the audio content delivery server of the present invention, a sound source of the distributable content data item or the non-distributable content data item may be a sound occurring in nature, a human voice or an artificially synthesized sound effect.

[0010] According to the audio content delivery server of the present invention, the server storage unit may be configured to store merchandise item information of a merchandise item purchased by a user such that the merchandise item information is associated with the user identification information, and the transmitting section may be configured to transmit the distributable content data item only to a user terminal having the user identification information associated with the merchandise item information.

[0011] Also, in order to achieve the above object, a user terminal of the present invention which is capable of communicating with the audio content delivery server over a network is characterised by comprising a request transmitting section configured to transmit a request specifying a distributable content data item or a request specifying a non-distributable content data item to the audio content delivery server, a list receiving section configured to receive a distribution list of distributable content data items or a non-distribution list of non-distributable content data items from the audio content delivery server in response to the request, a display section configured to display one of the distribution list and the non-distribution list received from the audio content delivery server, an audio content receiving section configured to receive, from the audio content delivery server, a distributable content data item selected from the distribution list, and to receive, from the audio content delivery server, a non-distributable content data item selected from the non-distribution list, and an acoustic output section configured to output, to the acoustic output section, one of the distributable content data item and the non-distributable content data item received from the audio content delivery server.

[0012] According to the user terminal of the present invention, the acoustic output section may have a sensor information receiving section configured to receive sensor information from a sensor configured to detect movement of the user, and the acoustic output section may be configured to transmit a distributable content data item or a non-distributable content data item to the acoustic output section in response to an output of the sensor.

Advantageous Effects of the Invention

[0013] According to the present invention, an audio content delivery system can be obtained that makes it possible to deliver audio content of a wide variety

in a Cloud environment to thereby satisfy the needs of every user who wishes to use the audio content, as well as to make it possible for anyone to deliver various audio content in a facilitated manner.

BRIEF DESCRIPTION OF DRAWINGS

[0014]

Fig. 1 is a diagram showing an overall configuration of an audio content distribution system 1 of the present invention.

Fig. 2 is a diagram showing a hardware configuration of an audio content delivery server according to an embodiment of the present invention.

Fig. 3 is a functional block diagram of the audio content delivery server according to the embodiment of the present invention.

Fig. 4 is a diagram showing an audio content table stored in a memory of the audio content delivery server according to the embodiment of the present invention.

Fig. 5 is a diagram showing a hardware configuration for a case in which a user terminal according to the embodiment of the present invention is used for uploading an audio content data item.

Fig. 6 is a diagram showing a hardware configuration for a case in which the user terminal according to the embodiment of the present invention is used for downloading an audio content data item.

Fig. 7 is a functional block diagram for a case in which the user terminal according to the embodiment of the present invention is used for downloading an audio content data item.

Fig. 8 is a flow chart showing a main process of the audio content delivery server according to the embodiment of the present invention.

Fig. 9 is a diagram for explaining an initial operation of the audio content delivery server according to the embodiment of the present invention.

Fig. 10 is a flow chart showing an audio content uploading process of the audio content delivery server according to the embodiment of the present invention.

Figs. 11A to 11D are diagrams showing uploading screens for explaining the audio content uploading process of the audio content delivery server according to the embodiment of the present invention.

Fig. 12 is a flow chart showing an audio content downloading process of the audio content delivery server according to the embodiment of the present invention.

Fig. 13 is a diagram showing downloading screens for explaining an audio content downloading process of the audio content delivery server according to the embodiment of the present invention.

Fig. 14 is a flow chart showing a process in the user terminal according to the embodiment of the present invention.

Fig. 15 is a diagram showing a first mode of use of the audio content distribution system of the present invention.

Fig. 16 is a diagram showing a second mode of use of the audio content distribution system of the present invention.

DETAILED DESCRIPTION

[0015] Further features of the present disclosure will become apparent from the following detailed description of exemplary embodiments with reference to the accompanying drawings.

[0016] <Overview of Audio Content Distribution System>

Fig. 1 is a diagram showing an overall configuration of an audio content distribution system 1 of the present invention. As shown in Fig. 1, the

audio content distribution system 1 includes an audio content delivery server 100 and at least one user terminal 200, 300 arranged to communicate with each other via a network NT.

[0017] The network NT is, for example, a communication network such as the Internet. In the audio content distribution system 1, the user terminal 200 is capable of uploading an audio content data item from the user terminal 200 to the audio content delivery server 100 over the network NT, the audio content delivery server 100 is capable of managing the uploaded audio content data item, and the user terminal 300 is capable of downloading the audio content data item from the audio content delivery server 100. Herein, “audio” includes a sound occurring in nature, a human voice (voice), artificially synthesized sound effects and so on, but is not limited thereto as long as it is a sound of an audible band that appeals to human hearing or a sound of a non-audible band. “Artificially synthesized sound effects” are, for example, a voice uttered by a robot, or a sound associated with the movement of the arm.

[0018] In other words, with the audio content distribution system 1, audio content can be communicated between the audio content delivery server 100 and the user terminals 200, 300 in a Cloud environment via the network NT. In this case, the user terminal 200 is mainly used for uploading an audio content data item, and the user terminal 300 is mainly used for downloading an audio content data item, but it is not limited thereto. For example, the user terminal 300 may be mainly used for uploading an audio content data item and the user terminal 200 may be mainly used for downloading an audio content data item, or, one of the user terminal 200 and the user terminal 300 may be mainly used for both the uploading and the downloading of an audio content data item.

[0019] The user terminal 300A is communicably connected with a speaker 301 and an acceleration sensor 302. The speaker 301 is given as an example of an

acoustic output section of the present invention, and the acceleration sensor 302 is given as an example of a sensor of the present invention. The user terminal 300 outputs an audio content data item acquired from the audio content delivery server 100 via the network NT to the speaker 301 using a short distance wireless communication technology such as, for example, Bluetooth (registered trademark).

[0020] In Fig. 1, the type of communication between the audio content delivery server 100 and the network NT is illustrated as a wired connection and the type of communication between the network NT and the user terminal 200, 300 is illustrated as a wireless connection. The connection between the user terminal 300 and each of the speaker 301 and the acceleration sensor 302 is illustrated as a short distance wireless connection. However, the type of communication connection is not limited to those illustrated in Fig. 1, and connections may be of other various types of communication technology.

[0021] Further, in Fig. 1, for ease of explanation, the user terminal 200 is illustrated as a desktop computer and the user terminal 300 is illustrated as a smartphone, but each of the user terminals 200 and 300 may be an information processing terminal, such as a desktop computer, a notebook computer, a smartphone, a tablet, or an electronic book which is connectable to a Cloud environment. Furthermore, the audio content delivery server 100 may be a server group (not shown) including a plurality of servers.

[0022] <Configuration of the Audio Content Delivery Server>

Fig. 2 is a diagram showing a hardware configuration of the audio content delivery server 100 according to the embodiment of the present invention. The audio content delivery server 100 is an audio content delivery server communicable with at least one user terminal 200, 300 via the network NT.

[0023] As shown in Fig. 2, the audio content delivery server 100 includes a CPU (Central Processing Unit) 110, a ROM (Read Only Memory) 120, a RAM (Random Access Memory) 130, a storage unit 140 serving as a server memory including a hard disk drive, and an interface 150 for wire communication or radio communication, and has a computer configuration in which the above components are connected via a bus 160.

[0024] The CPU 110 functions as a control unit configured to control operation and various processes of the audio content delivery server 100 in an integrated manner, and a server program stored in advance in the ROM 120 is loaded into the RAM 130. The RAM 130 is used as a work memory, and the CPU 110 is configured to cooperate with the server program to perform an audio content delivery operation.

[0025] The storage unit 140 stores user ID (Identification) as user identification information, as well as, among audio content data items received from the user terminal, a distributable content data item that is desired to be distributed and a non-distributable content data item that is not desired to be distributed. In other words, in the storage unit 140, a user information database (hereinafter also referred to as a "user information DB") 140u and an audio content database (hereinafter also referred to as an "audio content DB") 140m are created. The user information DB 140u is configured to store user IDs (user identification information) of the user terminals 200 and 300. The audio content DB 140m is configured to store the audio content data item that is received for uploading from the user terminal 200.

[0026] Herein, the audio content data item includes a distributable content data item that the user wishes to widely distribute to a third party, and a non-distributable content data items that is merely used by the user himself/herself,

and that the user does not wish to distribute to any third party other than the user himself/herself.

[0027] Fig. 3 is a functional block diagram for achieving an audio content delivery operation by the CPU 110 of the audio content delivery server 100. As shown in Fig. 3, the functional sections achieved by the CPU 110 of the audio content delivery server 100 executing in accordance with the server program includes a sorting section 111, a list creating section 112, a transmitting section 113 and an audio content managing section 114. In other words, the audio content delivery server 100 is achieved by installing a server program (software) in the RAM 130 of the computer (hardware), and each functional section is achieved by the hardware being controlled by the server program, and the hardware and the software being in cooperation with each other.

[0028] The sorting section 111 is a functional part that is configured to sort the distributable content data items and the non-distributable content data items, and in a case where the audio content data item received from the user terminal 200 through interface (I/F) 150 is a distributable content data item, sets a distribution flag on the audio content data item. On the other hand, in a case where the audio content data item received from the user terminal 200 is a non-distributable content data item, the sorting section 111 sets a non-distribution flag on the audio content data item.

[0029] Specifically, the sorting section 111 creates an audio content table T shown in Fig. 4 in which a user ID (U0001; U0002; U0003; U0004; U0005; U0006 ... U0001; U000m), a flag (1 (distribution flag), 0 (non-distribution flag)), a merchandise item type code (G0001; G0002; G0003; G0004 ...) as merchandise item information and an audio type code (MG; MG,TC; AD,MG; SE ... MG; TC) are associated with a content ID (MC0001; MC0002; MC0003; MC0004; MC0005; MC0006 ... MC0009; MC000n) of an audio content data item.

[0030] For example, G0001 is a merchandise item type code indicating a doll A, G0002 is a merchandise item type code indicating a poster B, and G0003 is a merchandise item type code indicating a doll C, and G0004 is a merchandise item type code indicating a poster Z.

[0031] For example, MG is an audio type code indicating greetings in the morning (Morning Greetings), TC is an audio type code indicating greetings when seeing someone off (Take Care), DG is an audio type code indicating greetings during daytime (Daytime Greetings), WH is an audio type code indicating greetings when welcoming someone (Welcome Home), NG is an audio type code indicating greetings at night (Nighttime Greetings), AD is an audio type code indicating advertisement (Advertisement), and SE is an audio type code indicating sound effects (Sound Effect). No audio type code being associated indicates that it is not possible to identify the kind of audio content.

[0032] The audio type code may be input by the user, or, a condition table in which lexical items such as words and the audio type codes are associated with each other may be created in advance and stored in the storage unit 140 such that the audio type code is provided to the audio content data item in accordance with the condition table. For example, in the condition table, a phrase "good morning" and an audio type code "MG" indicating an audio of "Morning Greetings" are associated with each other. Thereby, the CPU 110 of the audio content delivery server 100 performs speech recognition on an audio content data item, and in a case where the phrase "good morning" is recognized, refers to the condition table and determines that it is "Morning Greetings", and then assigns an audio type code "MG" to the audio content data item and registers it into the audio content table T.

[0033] In the audio content table T, the merchandise item type code of the merchandise items purchased by a user is associated with the user ID, thus

enabling the transmitting section 113 to transmit the distributable content data item only to the user terminal 300 having a user ID associated with the merchandise item type code. In the audio content table T, the content ID "MC0001" represents, for example, a distributable content data item (flag "1") which has been uploaded by a user with user ID "U0001" and associated with a merchandise item type code "G0001" and an audio type code "MG".

[0034] The content ID "MC0002" represents a distributable content data item (flag "1") that has been uploaded by a user with user ID "U0002" and is associated with a merchandise item type code "G0002" and audio type codes "MG, TC". The content ID "MC0003" represents a distributable content data item (flag "1") that has been uploaded by a user with user ID "U0003" and is associated with a merchandise item type code "G0003" and audio type codes "AD, MG". The content ID "MC0004" is a distributable content data item (flag "1") that has been uploaded by a user with a user ID "U0004" and is not associated with any merchandise item type code. The content ID "MC0005" represents a distributable content data item (flag "1") that has been uploaded by a user with a user ID "U0005" and is associated with a merchandise item type code "G0005" but not associated with any audio type code. The content ID "MC0006" is a distributable content data item (flag "1") that has been uploaded by a user with a user ID "U0006" and is not associated with any merchandise item type code nor with any audio type code.

[0035] The content ID "MC0009" represents an audio content data item that has been uploaded by the user with user ID "U0001" but is a non-distributable content data item (flag "0") and is not associated with any merchandise item type code but associated with an audio type code "MG". The content ID "MC000n" is audio content that has been uploaded by a user with user ID "U000m", but it is a non-distributable content data item (flag "0") and is not associated with any

merchandise item type code but is associated with an audio type code "TC". Among the content IDs, MC000n indicates that the number of audio content data items may be any integer number n. Among the user IDs, U000m indicates that the number of user IDs may be any integer number m.

[0036] Herein, a distribution flag is identification information indicating that an audio content data item is a distributable content and thus can be distributed, and a non-distribution flag is identification information indicating that an audio content data item is a non-distributable content data item and thus not to be distributed. Herein, "distribution" refers to an act of sale that is to transfer an audio content data item at cost or an act of sharing that is to transfer an audio content data item without cost through the network NT. Note that in the audio content table T, information about a sound source of audio and various information of a title name such as a title of a cartoon or an animation (hereinafter also referred to as "anime"), a character name of a character or the like of an anime, a voice actor's name, a gender of voice and spoken words or lines may also be associated with the content ID, and correspondence may correspond to the relevant information and, in such a case, those information may be stored in the storage unit 140. The sound source of a distributable content data item or a non-distributable content data item may be, for example, a sound occurring in nature, a human voice or artificially synthesized sound effects.

[0037] In a case where a request from the user terminal 300 specifies a distributable content data item, the list creating section 112 creates a distribution list of distributable content data items in accordance with the distribution flag, and in a case where a request from the user terminal specifies a non-distributable content data item, the list creating section 112 creates a non-distribution list of non-distributable content data items in accordance with the non-distribution flag. In other words, the list creating section 112 identifies the distributable content

data item in accordance with the distribution flag in the audio content table T, and creates in advance a distribution list in which only the distributable content data items are collected and stores it in the audio content DB 140m in the storage unit 140. Also, the list creating section 112 identifies the non-distributable content data item in accordance with the non-distribution flag in the audio content table T, and creates in advance a non-distribution list in which only the non-distributable content data items are collected and stores it in the audio content DB 140m in the storage unit 140.

[0038] The transmitting section 113 sends the distribution list or the non-distribution list to the user terminal 300 and causes it to be displayed thereon, and sends to the user terminal 300 the distributable content data item or the non-distributable content data item selected by the user terminal 300 based on the distribution list or the non-distribution list. In other words, the transmitting section 113 sends the distribution list or the non-distribution list created by the list creating section 112 to the user terminal 300 via the interface (I/F) 150 and the network NT, and causes it to be displayed on the user terminal 300. When the user selects a desired distributable content data item or a non-distributable content data item from the distribution list or the non-distribution list displayed on the user terminal 300, the transmitting section 113 reads out a distributable content data item or a non-distributable content data item from the audio content DB 140m in the storage unit 140 in accordance with the selected content ID, and transmits it to the user terminal 300 via the interface (I/F) 150 and the network NT.

[0039] The audio content managing section 114 manages audio content data items. For example, it manages a download history of the distributable content data items or the non-distributable content data items by the user. Also, it manages whether a sound source of a distributable content data item or a non-

distributable content data item is protected by rights as a voice belonging to a cartoon production company, an anime production company or the like, or management about copyrights such as audio is an original voice of the user or it is a voice imitation of a character of an anime.

[0040] Also, since the merchandise item type code is registered in the audio content table T as described above, the audio content managing section 114 is capable of determining that only the user who has purchased a specific merchandise item is allowed to download an audio content data item.

[0041] In other words, the user with the user ID "U0001" has purchased and owns a doll A of a merchandise item type code "G0001", and in the audio content table T, the user ID "U0001" and the merchandise item type code "G0001" are associated with each other. Therefore, in accordance with the audio content table T, the transmitting section 113 is capable of determining that the distributable content data item "MC0001" is downloadable to the user terminal 300 of the user with the user ID "U0001" who owns the doll A identified by the merchandise item type code "G0001".

[0042] Also, the user with the user ID "U0002" has purchased and owns a poster B of a merchandise item type code "G0002", and in the audio content table T, the user ID "U0002" and the merchandise item type code "G0002" are associated with each other. Therefore, in accordance with the audio content table T, the transmitting section 113 is capable of determining that the distributable content data item "MC0002" is downloadable to the user terminal 300 of the user with the user ID "U0002" who owns the poster B identified by the merchandise item type code "G0002".

[0043] Similarly, the user with the user ID "U0003" has purchased and owns a doll Z of a merchandise item type code "G0003", and in the audio content table T, the user ID "U0003" and the merchandise item type code "G0003" are associated

with each other. Therefore, in accordance with audio content table T, the transmitting section 113 is capable of determining that the distributable content data item "MC0003" is downloadable to the user terminal 300 of the user with the user ID "U0003" who owns the doll Z identified by the merchandise item type code "G0003".

[0044] On the other hand, in the audio content table T, the distributable content data item "MC0004" is not associated with any merchandise item type code. In this case, regardless of whether a user has a merchandise item, the transmitting section 113 is capable of determining that the distributable content data item "MC0004" is downloadable. However, it is not limited thereto, and because the distributable content data item "MC0004" does not have any merchandise item type code associated therewith, the transmitting section 113 may determine that the distributable content data item "MC0004" is downloadable.

[0045] Also, the user with the user ID "U0005" has purchased and owns a poster Z having the merchandise item type code "G0004", and in the audio content table T, the user ID "U0005" and the merchandise item type code "G0004" are associated with each other. Therefore, in accordance with audio content table T, the transmitting section 113 is capable of determining that the distributable content data item "MC0005" is downloadable to the user terminal 300 of the user with the user ID "U0005" owning the poster Z identified by the merchandise item type code "G0004".

[0046] With the audio content table T, it can be determined that the user with the user ID "U0006", to which a merchandise item type code is not associated, can download the distributable content data item "MC0006" even if he/she does not own any merchandise item.

[0047] <Configuration of the User Terminal>

Fig. 5 is a diagram showing a hardware configuration in a case where the user terminal 200 according to the embodiment of the present invention is used for uploading an audio content data item. The user terminal 200 is provided with a CPU 210, a ROM 220, a RAM 230, and an audio input section 240, an operation input section 250 and a display section 260, and an interface 270, each of which is connected, for example, through a bus 280.

[0048] The CPU 210 is a control unit that is configured to perform overall control of the user terminal 200, and an upload program for uploading an audio content data item stored in the ROM 220 is loaded into the RAM 230, and the RAM 230 is used as work memory, and the CPU 210 is configured to cooperate with the upload program to perform an audio content upload operation.

[0049] Also, the user terminal 200 is communicably connected to the audio content delivery server 100 via the interface 270. The audio input section 240 is a section that is connected, for example, to a microphone, and when a user is recording audio such as a voice, audio that the user wishes to record is input thereto. The display section 260 is a display for displaying screens or the like to be used by a user for uploading an audio content data item or for selecting whether to make it distributable or non-distributable by operating the user terminal 200. The operation input section 250 is an input section that is connected, for example, to a keyboard or a touch input unit, and where to detailed information about an audio content data item from a user that has been input by an audio input section 240 is input. The audio detailed information of the audio content data item is, for example, information about a sound source of the voice, a title name such as a title of an anime, a character name such as a character in an anime, a voice actor's name, a voice gender and various information about spoken words or lines.

[0050] The CPU 210 of the user terminal 200 is capable of uploading to the audio content delivery server 100, via the interface 270 and the network NT, audio content input via the audio input section 240 and the audio detailed information input via the operation input section 250. Also, the CPU 210 of the user terminal 200 is capable of uploading an audio content data item to the audio content delivery server 100, and at the same time or in advance, registering a user ID, a merchandise item type code, or an audio type code.

[0051] Fig. 6 is a diagram showing a hardware configuration for a case in which a user terminal 300 according to the embodiment of the present invention is used for downloading an audio content data item. The user terminal 300 is provided with a CPU 310, a ROM 320, a RAM 330, an interface 340, a display section 350, an audio output section 360, a sensor input section 370, and a storage unit 380, and the above components are connected via a bus 400, for example.

[0052] The CPU 310 is a control unit having overall control over the user terminal 300, and is configured to load, into the RAM 330, a download program for downloading an audio content data item stored in the ROM 320 while using the RAM 330 as work memory to thereby perform an audio content download operation in cooperation with the download program.

[0053] The user terminal 300 is communicably connected to the audio content delivery server 100 through the interface 340. The display section 350 is a display on which various screens or the like are displayed that are to be used by a user for downloading an audio content data item by operating the user terminal 300.

[0054] The audio output section 360 is connected to an acoustic output device such as, for example, a built-in speaker 390 equipped inside the user terminal 300 or a speaker 301 separate from the user terminal 300, and outputs a sound of an audio content data item when reproducing the audio content data item downloaded from the audio content delivery server 100.

[0055] The sensor input section 370 is an input section whereto, with the acceleration sensor 302 equipped inside the user terminal 300 or a merchandise item or equipped inside a wearable device worn by the user, sensor information sensing an action or a phenomenon of the user terminal 300, the merchandise item or the user, which is in the vicinity of the speaker 301, is input. It is to be noted that, in place of the sensor information from the acceleration sensor 302, sensor information from an image sensor, an optical sensor, an acoustic sensor, or the like, disposed in the vicinity of the speaker 301 may be input to the sensor input section 370.

[0056] Fig. 7 is a functional block diagram for a case in which the user terminal 300 is used for downloading an audio content data item. Functional sections implemented by the download program run on the CPU 310 of the user terminal 300 include a request sending section 311, a list receiving part 312, an audio content receiving section 313, an acoustic output section 314 and a sensor information determining section 315.

[0057] The request sending section 311 sends a request for an audio content data item (distributable content data item or non-distributable content data item) specified by a user of the user terminal 300 to the audio content delivery server 100 through the interface 340.

[0058] The list receiving part 312 receives, in a case where the audio content data item in response to the request from the user of the user terminal 300 is a distributable content data item, a distribution list of distributable content data items from the audio content delivery server 100 through the interface 340, and receives, in a case where the audio content data item is a non-distributable content data item, a non-distribution list of non-distributable content data items from the audio content delivery server 100.

[0059] The display section 350 displays the distribution list or the non-distribution list received from the audio content delivery server 100 via the list receiving part 312.

[0060] The audio content receiving section 313 receives, from the audio content delivery server 100 via the interface 340 and the network NT, the distributable content data item selected by a user of the user terminal 300 from the distribution list displayed on the display section 350. Also, the audio content receiving section 313 receives, from the audio content delivery server 100 via the interface 340 and the network NT, the non-distributable content data item selected by a user of the user terminal 300 from the non-distribution list displayed on the display section 350. The audio content receiving section 313 may receive the audio content data item which is a distributable content data item or a non-distributable content data item along with an audio type code. For example, the audio content receiving section 313 receives an audio content data item "MC0001" with an audio type code "MG", and stores the audio content data item "MC0001" in the storage unit 380 of the user terminal 300 together with the audio type code "MG".

[0061] The acoustic output section 314 transmits the distributable content data item or the non-distributable content data item received at the audio content receiving section 313 based on the sensor information received from the acceleration sensor 302 by the sensor input section 370 to the speaker 301 associated with the user terminal 300. The speaker 301 may have a sensor information receiving section that receives sensor information from the acceleration sensor 302 serving as a sensor detecting the movement of the user of the user terminal 300.

[0062] The sensor information determining section 315 carries out determination on sensor information input from the acceleration sensor 302 via

the sensor input section 370, and, triggered by the sensor information, instructs the acoustic output section 314 to output the distributable content data item or the non-distributable content data item to the speaker 301. Note that the sensor of the present invention may be any sensor as long as an action or a phenomenon of a user or a merchandise item in the vicinity of the speaker 301 can be detected. For example, the sensor of the present invention may be an acceleration sensor equipped inside a wearable device worn by a user in the vicinity of the speaker 301, and, in that case, the sensor information is acceleration information representing the movement of a part of the body of the user. Also, the sensor of the present invention may be, for example, an image sensor placed in the vicinity of the speaker 301, and, in that case, the sensor information is image information representing the movement of the user.

[0063] <Initial Operation of the Audio Content Delivery Server>

Referring to Fig. 8, an initial operation in a step before an audio content delivery process in the audio content delivery server 100 will be described.

[0064] The CPU 110 of the audio content delivery server 100 enters a main routine MRT1 and proceeds to step S11 in which, after acquiring a user ID from the user terminal 200 through the network NT and the interface 150, the acquired user ID is registered into the audio content table T. At this time, the CPU 110 of the audio content delivery server 100 causes a registration screen 410 as shown in Fig. 9 to be displayed on the display section 260 of the user terminal 200. The registration screen 410 is a screen transitioned from a main menu of an audio content delivery site by the audio content delivery server 100. The registration screen 410 prompts registration of a user ID or the like of the user through a user ID input field 410a that allows registration of a user ID at the time of login and a password input field 410b.

[0065] Subsequently, in step S12, the CPU 110 of the audio content delivery server 100 causes the display section 260 of the user terminal 200 to display a selection screen 411 as shown in Fig. 9, and determines whether the user of the user terminal 200 has an intention to carry out an uploading process of the audio content data item. Specifically, when an upload button 411a is selected on the selection screen 411 (step S12: YES), the CPU 110 proceeds to a subroutine SRT1 that performs an uploading process. On the other hand, when a download button 411b is selected on the selection screen 411 (step S12: NO), the CPU 110 proceeds to a subroutine SRT2 that performs a downloading process.

[0066] <Audio Content Uploading Operation at Audio Content Delivery Server>

The subroutine SRT1 in which an uploading process of an audio content data item at the audio content delivery server 100 is performed will be described with reference to Fig. 10.

[0067] The CPU 110 of the audio content delivery server 100 enters a subroutine SRT1 and proceeds to step S21 in which it is determined whether the audio content received from the user terminal 200 is intended to be a distributable content data item or a non-distributable content data item. At this time, the CPU 110 of the audio content delivery server 100 causes the display section 260 of the user terminal 200 to display a distribution inquiry screen 420 for making inquiries about distribution as shown in Fig. 11A. When a user of the user terminal 200 has selected a "SHARE" button 420a or a "SELL" button 420b on the distribution inquiry screen 420 displayed on the display section 260 of the user terminal 200, the CPU 110 of the audio content delivery server 100 determines that the audio content data item is intended to be a distributable content data item (step S21: YES), and proceeds to the next step S22.

[0068] In step S22, the CPU 110 of the audio content delivery server 100 receives a distributable content data item from the user terminal 200. At this time, the CPU 210 of the user terminal 200 causes the display section 260 of the user terminal 200 to display an audio content selecting screen 421 as shown in Fig. 11B. The user of the user terminal 200 selects, from the audio content selecting screen 421, one of an "audio content A" button 421a, an "audio content B" button 421b, and an "audio content C" button 421c as an upload target.

[0069] Next, in step S23, the CPU 110 of the audio content delivery server 100 receives, for example, an audio content data item "A" selected and transmitted by the user terminal 200, and registers the audio content data item "A" as a distributable content data item in an audio content DB 140m in the storage unit 140.

[0070] In step S24, the CPU 110 of the audio content delivery server 100 sets a distribution flag on the "audio content A", when registering it in the audio content DB 140m. Thereby, the CPU 110 of the audio content delivery server 100 completes an uploading process of the distributable content ("audio content A") in step S25. At this time, the CPU 110 of the audio content delivery server 100 causes an upload complete screen 422 as shown in Fig. 11C to be displayed on the display section 260 of the user terminal 200, and the user to visually observe that the uploading has completed normally.

[0071] After step S22, the CPU 110 of the audio content delivery server 100 may cause the display section 260 of the user terminal 200 to display a sound source type registering screen 423 shown in Fig. 11D, and allow selection of whether the sound source of the audio content data item to be uploaded is original audio of the user's own. The user of the user terminal 200 selects, on the sound source type registering screen 423, either a "YES" button 423a or a "NO" button 423b as a type of the sound source. In this manner, by making the user

select, at the user terminal 200, whether the audio is original audio of the user's own, it is not necessary to make determination on the audio content delivery server 100 side as to whether it is an original voice along with copyright management. Further, in addition to the sound source type registering screen 423, screens for inputting, for example, information about a sound source of audio, as well as audio detailed information that is various information of a title name such as title of an anime, a character name such as a character in an anime, a voice actor name, a voice gender, and spoken words or lines may be displayed.

[0072] On the other hand, in step S21, in a case where the user has selected a "DO NOT SHARE OR SELL" button 420c on the distribution inquiry screen 420, the CPU 110 of the audio content delivery server 100 determines that the audio content data item is intend to be a non-distributable content data item (step S21: NO), and proceeds to the next step S26.

[0073] In step S26, the CPU 110 of the audio content delivery server 100 receives a non-distributable content data item from the user terminal 200. At this time, the CPU 210 of the user terminal 200 causes an audio content selecting screen 421 as shown in Fig. 11B to be displayed on the display section 260. The user selects, from the audio content selecting screen 421, one of the "audio content A" button 421a, the "audio content B" button 421b, and the "audio content C" button 421c as a target to be uploaded.

[0074] Then, in step S27, the CPU 110 of the audio content delivery server 100 registers, for example, an audio content data item "B" received from the user terminal 200, for example, in the audio content DB 140m of the storage unit 140 as a non-distributable content data item.

[0075] In step S28, the CPU 110 of the audio content delivery server 100 sets a non-distribution flag on the audio content data item "B". Thereby, the CPU 110 of the audio content delivery server 100 completes an uploading process of the

non-distributable content (audio content data item "B") in step S25. At this time, the CPU 110 of the audio content delivery server 100 causes an upload completion screen 422 as shown in Fig. 11C to be displayed on the display section 260 of the user terminal 200, and the user to visually observe that the uploading has completed normally.

[0076] <Audio Content Downloading Operation in the Audio Content Delivery Server>

A subroutine SRT2 that performs downloading of the audio content data item in the audio content delivery server 100 will be described with reference to Fig. 12.

[0077] The CPU 110 of the audio content delivery server 100 enters at subroutine SRT2, moves on to step S30, and receives from the user terminal 300 a request specifying a distributable content data item or a request specifying a non-distributable content data item.

[0078] At this time, the CPU 310 of the user terminal 300 causes a list request screen 430 as shown in Fig. 13 at (A) to be displayed on the display section 350. The user of the user terminal 300 selects either the distribution list button 430a or the non-distribution list button 430b in the list request screen 430.

[0079] In step S31, the CPU 110 of the audio content delivery server 100 determines whether a request received from the user terminal 300 specifies a distribution list. In a case where the distribution list button 430a is selected in step S31 (step S31: YES), the CPU 110 proceeds to the next step S32.

[0080] In step S32, the CPU 110 of the audio content delivery server 100 creates a distribution list in which only the distributable content data item is collected in accordance with the audio content table T, and transmits the distribution list to the user terminal 300. Thereby, the CPU 110 of the audio

content delivery server 100 causes the distribution list screen 431 as shown in Fig. 13 at (B) to be displayed on the display section 350 of the user terminal 300.

[0081] In step S33, the CPU 110 of the audio content delivery server 100 determines whether or not a desired audio content selecting button 431a or 431b has been selected on the distribution list screen 431 by a user. Here, in a case where none of the audio content selecting buttons 431a and 431b are selected before an elapse of a predetermined time (step S33: NO), the process is terminated. In contrast, in a case where either the audio content selecting button 431a or 431b was selected in step S33 (step S33: YES), the process proceeds to the next step S34.

[0082] In step S34, in a case where, e.g., the audio content selecting button 431b indicating an intention to sell has been selected on the distribution list screen 431, the CPU 110 of the audio content delivery server 100 proceeds to the next step S35 after having carried out a process of charging a predetermined amount of money.

[0083] Whereas, in a case where the audio content selecting button 431a indicating an intention to share has been selected on the distribution list screen 43, the CPU 110 of the audio content delivery server 100 proceeds to the next step S35 without carrying out a charging process.

[0084] In step S35, the CPU 110 of the audio content delivery server 100 transmits, to the user terminal 300, an audio content data item ("MC0001" or "MC0002") having a content ID corresponding to the audio content selecting button 431a or 431b. Thereby, the downloading process of the distributable content data item completes in step S36.

[0085] Whereas, in step S31, in a case where a request is not specifying a distribution list, that is, in a case where a non-distribution list is specified (step S31: NO), it proceeds to the next step S37.

[0086] In step S37, the CPU 110 of the audio content delivery server 100 creates a non-distribution list in which only the non-distributable contents are collected in accordance with the audio content table T, and transmits the non-distribution list to the user terminal 300. Thereby, the CPU 110 of the audio content delivery server 100 causes the non-distribution list screen 434 as shown in Fig. 13 at (C) to be displayed on the display section 350 of the user terminal 300.

[0087] In step S38, the CPU 110 of the audio content delivery server 100 determines whether a desired audio content selecting button 434a or 434b has been selected on the non-distribution list screen 434 by a user. Here, in a case where none of the audio content selecting buttons 434a and 434b are selected before an elapse of a predetermined time (step S38: NO), the process is terminated. In contrast, in a case where either the audio content selecting button 434a or 434b is selected in step S38 (step S38: YES), the process proceeds to the next step S39.

[0088] In step S39, the CPU 110 of the audio content delivery server 100 transmits, to the user terminal 300, an audio content data item ("MC0009" or "MC000n") having a content ID corresponding to the audio content selecting button 434a or 434b. Thereby, a downloading process of the non-distributable content data item completes in step S40.

[0089] <Audio Output Operation at the User Terminal>

An audio output operation MRT2 of the audio content data item to the speaker 301 at the user terminal 300 will be described with reference to Fig. 14.

[0090] In step S51, the CPU 310 of the user terminal 300 transmits a request for requesting the downloading of the distribution list or the non-distribution list to the audio content delivery server 100. Specifically, a request is transmitted in response to either the distribution list button 430a or the non-distribution list

button 430b being selected from the list request screen 430 displayed on the display section 350 of the user terminal 300.

[0091] Then, in step S52, the CPU 310 of the user terminal 300 receives either the distribution list screen 431 or the non-distribution list screen 434 from the audio content delivery server 100.

[0092] In step S53, the CPU 310 of the user terminal 300 causes either the distribution list screen 431 (Fig. 13 at (B)) or non-distribution list screen 434 (Fig. 13 at (C)), which has been received, to be displayed. The user of the user terminal 300 selects the audio content data item requested, which is to be downloaded, from the distribution list screen 431 or from the non-distribution list screen 434.

[0093] In step S54, the CPU 310 of the user terminal 300 specifies an audio content data item desired to be downloaded to the audio content delivery server 100, and a distributable content or a non-distributable content that is specified is received from the audio content delivery server 100 and temporarily stored in the storage unit 380.

[0094] In step S55, the CPU 310 of the user terminal 300 determines whether sensor information from the acceleration sensor 302 has been received or not. In a case where the sensor information is not received before an elapse of a predetermined time (step S54: No), the process is terminated. In contrast, in step S55, in a case where the sensor information is received before the elapse of a predetermined time (step S54: Yes), the CPU 310 of the user terminal 300 proceeds to the next step S56.

[0095] In step S56, the CPU 310 of the user terminal 300 reads out the audio content data item stored in the storage unit 380 and outputs the audio content data item to the built-in speaker 390 or an external speaker 301 through the audio output section 360.

[0096] In this case, the CPU 310 of the user terminal 300 causes the display section 350 to display a device selection screen 432 shown in Fig. 13 at (D) in advance, and makes the user select either an acoustic output selection button 432a associated with the built-in speaker 390 or an acoustic output selection button 432b associated with the external speaker 301.

[0097] <Mode of Use>

Fig. 15 is a diagram showing a first mode of use of the audio content distribution system 1. The speaker 301 connected to the user terminal 300 is, for example, a small wireless connection-type speaker. The speaker 301 may include a CPU, a ROM, a RAM, and an interface for radio communication with the user terminal 300, and have a computer configuration in which the above components are connected via a bus. In the ROM, an acoustic output program is stored. In the RAM, an audio content data item received from the user terminal 300 is temporarily stored. The CPU functions as a control unit that integrally controls an acoustic output operation of the speaker 301, and is configured to load, into the RAM, the program stored in the ROM, and the RAM is used as a work memory, and the CPU cooperates with the acoustic output program read out from the RAM to perform the acoustic output operation. Note that, other than the RAM, a micro SD card may be used. Since the sound can be output in accordance with the determination at the CPU of the speaker 301 without waiting for an instruction from the user terminal 300, the sound can be output from the speaker 301 more promptly and naturally.

[0098] In such a case, the user of the user terminal 300 places the speaker 301 at a position near a figure 304, which is a doll representing a character in a cartoon or an anime of the user's preference and purchased by the user as a merchandise item, and listens to the audio content data item output from the speaker 301 to thereby create an impression as if the figure 304 is talking to the user. The

merchandise item purchased by a user is not limited to the figure 304, but may be a poster, for example. In such a case, the speaker 301 may be, for example, equipped inside a device for hanging a poster.

[0099] According to another variant, an inquiry screen such as "Will you allow automatic voice downloading in a wireless environment? (Special voices and advertisements will be included.)" may be displayed on the user terminal 300, and in response to the user pushing the "Yes" button, the audio content data item may be automatically downloaded from the audio content delivery server 100 to the user terminal 300 in a wireless environment such as Wi-Fi. The special voice is, for example, an audio content data item that is distributed on a limited-time basis and that gives a surprise to the user such as "A Happy New Year! Let's have fun this year, too!", "Merry Christmas! Let's spend the day together tomorrow." and so on, in the voice of a character of the figure of the anime owned by the user. Advertisement is, for example, audio content including an advertisement such as "Welcome home. The newest game is coming soon! Can't wait!" in the voice of a character of the figure of the anime owned by the user.

[0100] According to yet another variant, an audio content data item may be output from the speaker 301 at a time of the day or during a period of time that the user of the user terminal 300 has voluntarily set. For example, the user causes the storage unit 380 of the user terminal 300 to store an audio type code "MG" indicating that it is an audio of "greetings of the morning" and clock information representing the time of day at which the audio content data item should be reproduced "7:00" in an associated manner. The user terminal 300 is provided with a clock information input section so that clock information representing a time of day from a timer device such as a clock or a stopwatch, or the elapsed time from a certain time point is input. In a case where the input clock information indicates a time of day "7:00", the user terminal 300 sends an

instruction to the speaker 301 to output audio content data item having an audio type code "MG" associated with the time of day "7:00" to the acoustic output section 314.

[0101] Similarly, for other audio type codes (TC, DG, WH, AD, NG, and SE), a time of day at which the audio content should be reproduced can be set. Thereby, the audio content data item that has been automatically downloaded from the audio content delivery server 100 to the user terminal 300 can be output from speaker 301 depending on the time zone, scene, and the situation.

[0102] Fig. 16 is a diagram showing a second mode of use in an audio content distribution system 1. A wearable device 305 worn by the user has, for example, an acceleration sensor 302 equipped therein as a sensor. Therefore, for example, when a user of the user terminal 300 raises his/her arm over his/her head, the acceleration sensor 302 of the wearable device 305 detects the movement of the arm, and triggered by the reception of sensor information to be obtained from the acceleration sensor 302 at the user terminal 300, the sound of the audio content data item can be emitted from the speaker 301.

[0103] The speaker 301 connected to the user terminal 300 may be provided in the wearable device 305 which is the same as the one in which the acceleration sensor 302 is provided, or may be provided in a device separate from the wearable device 305 provided with the acceleration sensor 302.

In a case where the speaker 301 is provided in the wearable device 305 which is the same as the one in which the acceleration sensor 302 is provided, the speaker 301 is, for example, a speaker that is equipped inside the wearable device 305 worn by the user.

[0104] In a case where the speaker 301 is provided in a device separate from the wearable device 305, the speaker 301 may be a speaker that is equipped inside a headset 306, which is a device separate from the wearable device 305 in which

the acceleration sensor 302 is equipped and is communicable with the wearable device 305. Therefore, for example, when a user of the user terminal 300 raises his/her arm over his/her head, the acceleration sensor 302 of the wearable device 305 detects the movement of the arm, and triggered by the reception of sensor information to be obtained from the acceleration sensor 302 at the user terminal 300, the sound of the audio content data item can be emitted from the speaker 301 provided in the head set 306 worn on the user's head. In such a case, since the speaker 301 is at a position near the user's mouth, an effect as if the user is giving off the audio content is obtained.

[0105] In this manner, with the audio content distribution system 1, by using the audio content delivery server 100 and the user terminals 200 and 300, various audio content data items can be easily distributed via the Internet and the audio content data items can be downloaded and output in association with a merchandise data item possessed by the user, and thus various needs of the user of the user terminal 300 can be fully satisfied.

[0106] Until now, amateur voice actors had few opportunities to provide sound such as their own voices unless he/she belonged to a voice actor's office or the like. However, according to the audio content distribution system 1 of the present invention, even an amateur voice actor other than the voice actors approved as the official voices of the characters of the anime can provide an opportunity to widely provide audio content to a third party.

What is claimed is:

1. An audio content delivery server capable of communicating with at least one user terminal over a network, characterised by comprising:

a server storage unit configured to store user identification information and, among a plurality of audio content data items received from a user terminal, a distributable content data item that is desired to be distributed and a non-distributable content data item that is not desired to be distributed;

a sorting section configured to set a distribution flag on the distributable content data item and a non-distribution flag on the non-distributable content data item, the distribution flag indicating that the distributable content data item is distributable, the non-distributable content flag indicating that the non-distributable content data item is not distributable;

a list creating section configured to create a distribution list of distributable content data items based on the distribution flag in a case where a request from the user terminal specifies the distributable content data item and a non-distribution list of non-distributable content data items based on the non-distribution flag in a case where a request from the user terminal specifies the non-distributable content data item; and

a transmitting section configured to transmit, to the user terminal, the distribution list or the non-distribution list to be displayed on the user terminal, and to transmit, to the user terminal, a distributable content data item selected by the user terminal from the distribution list or a non-distributable content data item selected by the user terminal from the non-distribution list.

2. The audio content delivery server according to claim 1, wherein a sound source of the distributable content data item or the non-distributable

content data item is a sound occurring in nature, a human voice or an artificially synthesized sound effect.

3. The audio content delivery server according to claim 1 or 2, wherein the server storage unit is configured to store merchandise item information of a merchandise item purchased by a user such that the merchandise item information is associated with the user identification information, and

the transmitting section is configured to transmit the distributable content data item only to a user terminal having the user identification information associated with the merchandise item information.

4. A user terminal capable of communicating with the audio content delivery server over a network, characterised by comprising:

a request transmitting section configured to transmit a request specifying a distributable content data item or a request specifying a non-distributable content data item to the audio content delivery server;

a list receiving section configured to receive a distribution list of distributable content data items or a non-distribution list of non-distributable content data items from the audio content delivery server in response to the request;

a display section configured to display one of the distribution list and the non-distribution list received from the audio content delivery server;

an audio content receiving section configured to receive, from the audio content delivery server, a distributable content data item selected from the distribution list, and to receive, from the audio content delivery server, a non-distributable content data item selected from the non-distribution list; and

an acoustic output section configured to output, to the acoustic output section, one of the distributable content data item and the non-distributable content data item received from the audio content delivery server.

5. The user terminal according to claim 4, wherein

the acoustic output section has a sensor information receiving section configured to receive sensor information from a sensor configured to detect movement of the user, and

the acoustic output section is configured to transmit a distributable content data item or a non-distributable content data item to the acoustic output section in response to an output of the sensor.