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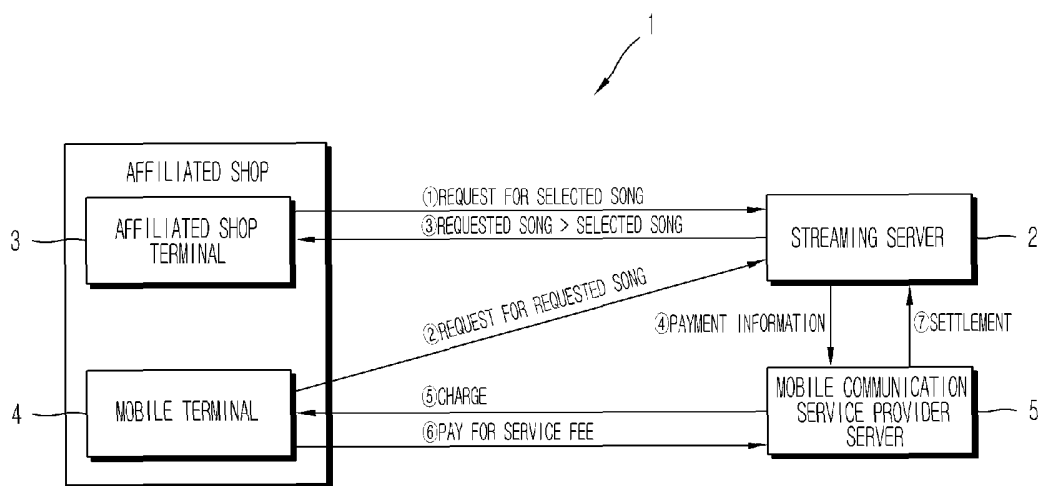
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(54) Title: SYSTEM AND METHOD FOR PROVIDING CUSTOMER-REQUESTED SONG USING MOBILE PHONE IN AFFILIATED SHOP



(57) Abstract: Disclosed is a system for providing customer-requested songs using mobile phones, which receives a requested song from a mobile terminal of a customer in an affiliated shop and provides the requested song to the affiliated shop terminal by streaming service. The system includes a streaming server for receiving a subscription request from a shop and admitting the shop as an affiliated shop, receiving selected song information from the affiliated shop, receiving requested song information from customers, and transmitting music files based on the order set by the affiliated shop, the streaming server streaming a music file of the requested song prior to that of the selected song if there is a requested song; a mobile terminal for the customer to input and transmit the requested song information to the streaming server; and an affiliated shop terminal for receiving a music file from the streaming server and regenerating the music file.

Description

SYSTEM AND METHOD FOR PROVIDING CUSTOMER-REQUESTED SONG USING MOBILE PHONE IN AFFILIATED SHOP

Technical Field

- [1] The present invention relates to system and method for providing customer-requested songs using a mobile phone, and more particularly system and method for providing customer-requested songs in which, if a customer in an affiliated shop transmits requested song information to a server using a mobile phone, the server adds the requested song to a service song list of the affiliated shop and transmits the requested song to a terminal installed in the affiliated shop and also the customer listens to the requested song through the affiliated shop terminal.

Background Art

- [2] Streaming service is a method for regenerating voice, picture, animation and the like on Internet in real time. In the streaming service, a client regenerates data transmitted from a server in real time, which may reduce a running time and not be influenced by the capacity of a hard disk drive. In addition, though a fast connection line capable of instantly downloading the entire file from the server is not prepared in the client, the data provided from the server is regenerated together with being stored in a buffer by means of software such as Real Player or Window Media Player.
- [3] The streaming service gives much influence on the existing cultural life along with technical development and publicity of Internet.
- [4] In a shop such as a restaurant, conventionally, a manager of the shop subscribes for an Internet broadcasting station or other portal sites giving sound source streaming service, downloads music files (or, song files) provided by a server or requested by the manager to a shop terminal, and then plays the music (or, song) for customers.
- [5] When using the streaming service in a shop, the manager may not buy music tapes, CD or records as well as an audio player for playing them, but the manager may provide music to customers with a general PC terminal that may use Internet and regenerate multimedia. In this point of view, the streaming service meets with a favorable reception.
- [6] However, since only the files provided by a server is simply played in the shop, it is impossible to play a music requested by any customer like a disk jockey or mention a story of any customer, so the shop may not give a customer-familiar service.

Disclosure of Invention

Technical Problem

- [7] The present invention is designed in consideration of the above problems, and therefore it is an object of the invention to provide system and method for providing customer-requested songs using mobile phones, which allows a streaming server to receive a requested song and a customer story from mobile phones of customers in a specific affiliated shop, and also allows the affiliated shop to provide customer-familiar service by means of bi-directional communication that gives the requested song and the customer story in real time to the corresponding affiliated shop.

Technical Solution

- [8] In order to accomplish the above object, the present invention provides a system for providing customer-requested songs using mobile phones, which receives a requested song from a mobile terminal of a customer in an affiliated shop and provides the requested song to a corresponding affiliated shop terminal by means of streaming service in order to provide the requested song to the customer in the affiliated shop, the system including a streaming server for receiving a request for subscription from a shop and admitting the shop as an affiliated shop, receiving selected song information from the affiliated shop, receiving requested song information from customers, and transmitting music files based on the order set by the affiliated shop, the streaming server streaming a music file of the requested song prior to a music file of the selected song in case there is a requested song from the customer; a mobile terminal for the customer to input and transmit the requested song information to the streaming server; and an affiliated shop terminal for receiving a music file from the streaming server and regenerating the music file.
- [9] According to a first embodiment of the present invention, the streaming server receives the requested song information from the mobile terminal by means of wireless Internet communication.
- [10] According to a second embodiment, the streaming server receives the requested song information from the mobile terminal by means of SMS (Short Message Service) communication.
- [11] In another aspect of the invention, there is also provided a method for providing customer-requested songs using mobile phones, which receives a requested song from a mobile terminal of a customer in an affiliated shop and provides the requested song to a corresponding affiliated shop terminal by means of streaming service in order to provide the requested song to the customer in the affiliated shop, the method including (a) a streaming server receiving a request for subscription from the affiliated shop terminal, receiving affiliated shop information therefrom, storing the affiliated shop information in an affiliated shop information DB, and endowing an affiliated shop

identifier thereto; (b) the streaming server receiving selected song information from the affiliated shop terminal, and adding the selected song information to an affiliated shop-selected song list; (c) the streaming server receiving requested song information from the mobile terminal, and adding the requested song information to a customer-requested song list; and (d) the streaming server receiving a request for transmission of music files from the affiliated shop terminal, and transmitting the corresponding music files to the affiliated shop terminal with a requested song in the customer-requested song list being prior to the affiliated shop-selected song list.

Brief Description of the Drawings

- [12] The following drawings attached to this specification illustrate preferred embodiments of the present invention to facilitate better understanding of the technical spirit of the invention together with the detailed description provided later, so the present invention should not be limited to the drawings. In the drawings:
- [13] FIG. 1 is a functional diagram showing a system for providing customer-requested songs according to the present invention;
- [14] FIG. 2 shows configuration of a system for providing customer-requested song using a wireless Internet manner according to a first embodiment of the present invention;
- [15] FIG. 3 shows data flows of the wireless Internet manner according to the first embodiment of the present invention;
- [16] FIG. 4 shows configuration of a system for providing customer-requested songs using a SMS manner according to a second embodiment of the present invention;
- [17] FIG. 5 shows data flows of the SMS manner according to the second embodiment of the present invention;
- [18] FIG. 6 is a flowchart illustrating a method for providing customer-requested songs according to the present invention;
- [19] FIG. 7 is a flowchart illustrating a song selection process executed in an affiliated shop terminal according to the present invention, in detail;
- [20] FIG. 8 is a flowchart illustrating a song request process by a customer using the wireless Internet manner according to the first embodiment of the present invention, in detail;
- [21] FIG. 9 is a flowchart illustrating a song request process by a customer using the SMS manner according to the second embodiment of the present invention, in detail; and
- [22] FIG. 10 is a flowchart illustrating a music file transmission process according to the present invention.

Best Mode for Carrying Out the Invention

- [23] he present invention will be described in detail referring to the drawings.
- [24] FIG. 1 is a diagram schematically showing a customer-requested song providing system 1 according to one embodiment of the present invention. The customer-requested song providing system 1 of the present invention includes a streaming server 2, an affiliated shop terminal 3, and a mobile terminal 4.
- [25] The streaming server 2 receives selected song information from the affiliated shop terminal 3 installed in an affiliated shop, and receives requested song information from the mobile terminal 4 of a customer who uses the affiliated shop (①, ②). In addition, if the streaming server 2 receives a request for music file streaming service from the affiliated shop terminal 3, the streaming server 2 streams a music file of the requested song of the customer to the affiliated shop terminal 3 prior to the selected song of the affiliated shop (③). Thus, if all requested songs of customers are preferentially provided and no requested song remains, the selected songs of the affiliated shop are provided according to a predetermined order set by the affiliated shop. In addition, in case of receiving a requested story in addition to the requested song from the customer, the streaming server 2 streams the requested story in addition to the requested song.
- [26] If confirming that the requested song of the customer is transmitted to the affiliated shop terminal 3 according to a predetermined criteria, the streaming server 2 accumulates payment information of each customer, and then informs a mobile communication service provider server 5 of payment details (④). The mobile communication service provider server 5 charges a service fee imposed by the payment information to be included in mobile phone charges of the customer (⑤), and the customer pays for the fees (⑥). In addition, the mobile communication service provider server 5 deducts a predetermined commission and then transfers remaining money to a streaming service provider (⑦).
- [27] The affiliated shop terminal 3 interfaces with the streaming server 2 on a wire/wireless network by using a dedicated program or a web browser. In addition, the mobile terminal 4 of a customer interfaces with the streaming server 2 by means of the mobile communication service provider server 5 on a mobile communication network by using wireless Internet or SMS (Short Message Service).
- [28] The affiliated shop terminal 3 is a computer terminal such as a desktop, PDA or notebook installed to the affiliated shop, and needs a network function and a data file regeneration function as a basic option. In order to use the requested song providing service of the present invention, the affiliated shop terminal 3 should subscribe for the streaming server 2 and be endowed with an affiliated shop identifier. The affiliated shop identifier is a data that should be input by a customer when the streaming server 2 receives a requested song from the customer, and it is a peculiar identifying code that the streaming server 2 refers to when determining an affiliated shop to which the

requested shop is transmitted. The affiliated shop identifier is stored in a database (DB) together with directory path information of the corresponding affiliated shop in the streaming server 2.

[29] In addition, it is preferable that a guidance book for guiding customers to request a requested song or a requested story is prepared in affiliated shops so that customers may use the requested song providing service. In addition, the guidance book preferably records a wireless Internet using method (e.g., hot keys for the Wink service), a SMS using method, an affiliated shop identifier, and music lists including music number, singer name, and song title. The music number is used as a peculiar identifying code for identifying a music file. However, the present invention is not limited thereto, but the music number may be replaced with a singer name or a song title.

[30] The mobile terminal 4 is an information communication terminal capable of using wireless Internet communication and SMS communication such as PDA, PCS, cellular phone, portable Internet phone and the like, possessed by a customer.

[31] In the present invention, a service fee of the customer, generated when the streaming server 2 streams a requested song or both requested song and story, the service fee of a customer may be differentially set according to the service policy. For example, the service fee may be set higher when a requested story is added.

[32] The customer-requested song providing system 1 of the present invention may be classified into a first embodiment (using wireless Internet) and a second embodiment (using SMS) according to the modes in which the streaming server 2 receives requested song information from the mobile terminal 4 of a customer. The requested song information transmitted from a customer in the first and second embodiments includes items shown in the following example 1, but not limitedly. Customer information is a peculiar number for identifying the customer, and it may be a phone number of the mobile terminal.

[33]

[34] < Example 1 >

[35] Requested Song Information = Customer Information (Phone Number of Mobile Terminal) + Affiliated Shop Identifier + Music Information (Music Number or Singer Name + Song Title)

[36]

[37] Hereinafter, the technique for the streaming server 2 to receive the above requested song information in the first embodiment (using wireless Internet) and the second embodiment (using SMS) of the present invention will be described.

[38] FIG. 2 shows a customer-requested song providing system 1 using the wireless Internet according to the first embodiment of the present invention.

- [39] In the first embodiment, the streaming server 2 includes an affiliated shop-selected song receiving unit 21, a wireless Internet receiving unit 22, a requested song transmission unit 24, an ARS (Automatic Response Service) guidance unit 25, and a payment processing unit 27.
- [40] The affiliated shop-selected song receiving unit 21 receives a requested for selected song designation from the affiliated shop terminal 3 logged in, provides a full song list to the affiliated shop terminal 3, and adds selected songs selected by the affiliated shop to an affiliated shop-selected song list 210. The full song list refers to a music information DB (not shown). The music information DB includes data items as shown in the following example 2, but not limitedly. A regeneration time is defined as a running time of a sound source data.
- [41]
- [42] < Example 2 >
- [43] Music Information DB = Music Number (key) + Singer Name + Song Title + File Size + Running Time
- [44]
- [45] The affiliated shop-selected song list 210 includes the items of the above music information DB, and is preferably arranged substantially in a transmission service order selected by the affiliated shop. In addition, the information of the affiliated shop-selected song list 210 is preferably displayed on a screen of the affiliated shop terminal 3 so that a manager of the affiliated shop may edit the selected songs and a transmission (running) order.
- [46] The wireless Internet receiving unit 22 receives a request for accessing the wireless Internet from the mobile terminal 4 of a customer, provides the above full song list to the mobile terminal 4, receives requested song information (see the example 1) from the mobile terminal 4, and records the requested song information in a customer-requested song list 220. In the first embodiment of the present invention, the Wink service may be used as one scheme of the wireless Internet communication.
- [47] The Wink service allows a user to access a domain by clicking a specific number expressed by a numeral so as to reduce inconvenience of inputting the full name of the corresponding domain in connection with the wireless Internet when the user uses the wireless Internet by use of the mobile terminal 4, and the Wink service uses a format of "domain character information + #(identifier) + specific number".
- [48] Referring to FIG. 3, a customer accesses the streaming server 2 by means of the Wink service or a general wireless Internet accessing manner (①). In case the streaming server 2 has a domain of 'www.mjockey.com' and a peculiar number of '7777' a hot key for the Wink service to be input by the customer is as shown in the following example 3.

[49]

[50] < Example 3 >

[51] Example) 6562539#7777 + call button

[52] 6562539: numeral buttons of the mobile phone corresponding to 'mjockey'

[53] #: identifier

[54] 7777: a peculiar number of the domain of www.mjockey.com

[55]

[56] The customer inquires a requested song on a music inquiring screen provided by the streaming server (②), and transmits requested song information to the streaming server 2 (③). The customer-requested song list 220 includes items as shown in the following example 4, but not limitedly.

[57]

[58] < Example 4 >

[59] Customer-requested Song List = Customer Information + Request Date and Time + Music Number + Singer Name + Song Title + File Size + Running Time

[60]

[61] In the present invention, as a storage means for the requested song information selected by the affiliated shop or the customer, the affiliated shop-selected song list 210 and the customer-requested song list 220 are designed in a file structure, but they may also be designed in a DB structure, not limitedly.

[62] If the wireless Internet receiving unit 23 receives the requested song information of the customer, the streaming server 2 checks whether a corresponding music exists in the music information DB as shown in the example 2 by use of the music number or the singer name and the song title. If the music does not exist, the streaming server 2 asks the customer to request another music. If the music exists therein, the streaming server 2 asks the customer to confirm payment by guiding a payment amount by means of payment guidance (④). The customer selects confirmation of payment to settle the payment (⑤).

[63] When receiving a request for transmission of a music file from the affiliated shop terminal 3, the requested song transmission unit 24 provides a requested song in the customer-requested song list 220 preferentially whenever transmitting a new music.

[64] For example, it is assumed that a fifth song among ten songs in the affiliated shop-selected song list 210 is currently regenerated. If the fifth song is finished and it is time to transmit the sixth song, the requested song transmission unit 24 inquires the customer-requested song list 220 preferentially according to the order of priority and checks whether there is a requested song of a customer. If there is a requested song, the requested song(s) from the first is streamed to the affiliated terminal 3. If one requested song in the customer-requested song list 220 is transmitted, that requested song is

deleted. If there is no further requested song in the customer-requested song list 220, the streaming server 20 provides the sixth song in the affiliated shop-selected song list 210, which was temporarily intercepted, and the customer-requested song list 220 is preferentially inquired whenever a new song is provided. The affiliated shop-selected song list 210 is regenerated in a circulating manner so that the first song is prepared after the tenth song is completely regenerated.

[65] The music number in the affiliated shop-selected song list 210 or the customer-requested song list 220 is used for inquiring a music file from the music DB 240. The music DB 240 includes items as in the following example 5, but not limitedly.

[66]

[67] < Example 5 >

[68] Music DB = Music Number (Peculiar Music Identifier) + Music File (Sound Source Data)

[69]

[70] In the first embodiment of the present invention, it is possible to provide a voice streaming service of a requested story as an additional option of the requested song service of a customer. The wireless Internet receiving unit 22 receives the requested song information of the customer and also provides a voice guidance of the ARS guidance unit 25 to the customer who selects a requested story service according to the request of customer. The customer records a story according to the ARS guidance by using the mobile terminal 4. The recorded story is stored in a requested story DB 250, and whenever a requested song in the customer-requested song list 220 is transmitted by the requested song transmission unit 24, the corresponding requested story is inquired from the requested story DB 250. According to the service policy, the requested story may be transmitted before or after a music file of the requested song is transmitted. The requested story DB 250 includes items as in the following example 6, but not limitedly. A request date and time in the example 6 is managed in the same way as the requested date and time of the customer-requested song list 220 shown in the example 4.

[71]

[72] < Example 6 >

[73] Requested Story DB = Customer Information + Requested Date and Time + File Size + Running Time + Requested Story Voice Data

[74]

[75] The payment processing unit 27 stores the payment information, settled by the confirmation of payment by the customer through the wireless Internet receiving unit 21, in a payment detail DB 270. The payment detail DB 270 includes items as in the following example 7, but not limitedly.

[76]

[77] < Example 7 >

[78] Payment Detail DB = Affiliated Shop Identifier + Customer Information + Payment Date and Time + Payment Amount + Music Number + Payment Settlement Flag

[79]

[80] In the above, the payment settlement flag is registered in a log-off state at the instant that a customer settles the payment, and it is turned into an ON state at the instant that the music file is actually transmitted or completely transmitted. In addition, at a point of time in every month, only payment information in an ON state among the details recorded in the payment detail DB 270 is added up for each customer information (or, each mobile phone number) and then transmitted to the mobile communication service provider server 5. The mobile communication service provider server 5 charges a service fee to the corresponding customer and receives the fee, and then transfers the money deducting a commission to the streaming service provider. In addition, according to the service policy, the streaming service provider may return a part of gains to the affiliated shop in order to promote the service.

[81] FIG. 4 shows a customer-requested song service system 1 using SMS according to the second embodiment of the present invention.

[82] According to the second embodiment, the streaming server 2 includes an affiliated shop-selected song receiving unit 21, a SMS receiving unit 23, a requested song transmission unit 24, a TTS (Text To Speech) converter 26, and a payment processing unit 27.

[83] The affiliated shop-selected song receiving unit 21, the requested song transmission unit 24 and the payment processing unit 27 are substantially identical to those of the first embodiment, and not described in detail here.

[84] Referring to FIG. 5, a customer transmits a text message including requested song information to the streaming server 2 by using a mobile terminal (①). In case of SMS employed in the second embodiment, the customer makes a text message including 'user information + affiliated shop identifier + music information (music number or singer name + song title)' according to an input format classified by identifiers (e.g., * and #), and then sends the text message with designating a SMS-MO (Mobile Originated) phone number endowed to the streaming server 2 as a receiver (①). A SMS-MO server installed to the mobile communication service provider server 5 receives the text message from the customer and then transmits the text message to the corresponding streaming server 2.

[85] The following example 8 shows an example of the input format of the text message in case the affiliated shop identifier is '21252' and the music number is '60728'. The example 2) may be used when a user already knows a singer name and a song title.

[86]

[87] < Example 8 >

[88] Example 1) 21252*60728

[89] Example 2) 21252*Beatles*Let it be

[90]

[91] In particular, in employing the above wireless Internet, the streaming server 2 may check the music information DB of the example 2 to verify whether the music information requested by a customer may be provided and then receive confirmation of the payment in real time, but it is impossible when using SMS.

[92] Thus, in employing SMS, the SMS receiving unit 23 receives a text message from a customer, and then inquires the music information DB to determine whether the corresponding music file may be provided. If the corresponding music file does not exist, the SMS receiving unit 23 informs the customer that the requested music does not exist in the music information DB.

[93] If the music file may be provided, the SMS receiving unit 23 removes an identifier from the text message received from the customer, and then adds the requested song information to the customer-requested song list 220. The customer-requested song list 220 of the second embodiment includes an item structure as in the following example 9, but not limitedly.

[94]

[95] < Example 9 >

[96] Customer-requested Song List = Customer Information + Request Date and Time + Music Number + Singer Name + Song Title + File Size + Running Time + Registration State Flag

[97]

[98] The registration state flag in the example 9 is initially set as a temporary state, and then recorded in the customer-requested song list 220. The SMS receiving unit 23 transmits a URL (Uniform Resource Locator) call-back text message including guidance and consents of payment amount (② of FIG. 5). The customer accesses the streaming server 2 by means of the call-back URL and selects confirmation of the payment (③). If the confirmation of the payment is received from the customer, the registration state flag is changed into a normal state, and the payment information of the customer is stored in the payment detail DB 270 of the above example 6. If a confirmation of payment is not received from the customer a predetermined time after the URL call-back text message is transmitted, the requested song is deleted.

[99] The requested song transmission unit 24 streams the requested song of the customer prior to the selected song of the affiliated shop as in the first embodiment. In addition, among the requested songs, a requested song whose registration state flag is in a

normal state is preferentially provided.

[100] Also in the second embodiment of the present invention, it is possible to give voice streaming service of a requested story in addition to providing the requested song of the customer. The SMS receiving unit 23 receives a requested story in a text message in addition to the requested song information of the customer. The following example 10 shows that a requested story is added to the example 8.

[101]

[102] < Example 10 >

[103] Example 1) 21252*60728#Today is my birthday, please celebrate my birthday

[104] Example 2) 21252*Beatles*Let it be#Today is hundredth day of our first meeting, please offer your congratulations

[105]

[106] If the SMS receiving unit 23 receives the text message including a requested story, the requested story of the customer is separated, and the requested story in a text format is transmitted to the TTS converter 26. The TTS converter 26 automatically converts a text format into a voice format, and then stores the requested story in a voice format in the requested story DB 250.

[107] Meanwhile, it is preferred that the affiliated shop terminal 3 inquires current details of the affiliated shop-selected song list and the customer-requested song list by using one screen. In addition, it is also preferred that a manager of the affiliated shop is endowed with an authority to cancel a specific song or change the order of songs in the affiliated shop-selected song list 210 and the customer-requested song list 220. Thus, when a customer who has requested a song is willing to leave the affiliated shop, the customer may request to cancel the requested song, and then the manager cancels the requested song from the list before being regenerated so that the customer may not bear the service fee.

[108] The customer-requested song providing system 1 described in the first and second embodiments may also provide additional services such as an estimated regeneration time guidance service and a regeneration appointment service.

[109] In the estimated regeneration time guidance service, the streaming server 2 receives a requested song from the mobile terminal 4, and then informs of the number of currently reserved requested songs and an estimated streaming time by accumulating the number of requested songs registered in the customer-requested song list 220 and their running times.

[110] In addition, in the appointment service, the streaming server 2 receives an appointed time set by the customer together with the requested song from the mobile terminal 4, and then streams the requested song at the appointed time. For this purpose, the streaming server 2 further includes a timer and a requested song reserve DB (not

shown).

[111] FIG. 6 is a flowchart illustrating a method for providing customer-requested songs according to one embodiment of the present invention.

[112] In the affiliated shop subscription and affiliated shop identifier endowing step S10, the streaming server 2 receives a request for subscription from the affiliated shop terminal 3, records affiliated shop information in an affiliated shop information DB (not shown), and endows an affiliated shop identifier. The affiliated shop identifier is stored in the affiliated shop information DB.

[113] In the affiliated shop-selected song list adding step S20, the streaming server 2 adds an affiliated shop-selected song to the affiliated shop-selected song list 210. It will be described in more detail with reference to FIG. 7.

[114] In the affiliated shop terminal logging-in step S21, the streaming server 2 executes a logging-in process by member certification of the affiliated shop. On an initial screen of the logged-in affiliated shop, the affiliated shop-selected song list 21 registered previously and the customer-requested song list 220 initialized are displayed.

[115] In the full song list providing step S22, the streaming server 2 provides a full song list according to a request for registration of the affiliated shop-selected song. In the selected song information receiving step S23, the selected song information selected by the affiliated shop (or, its manager) is received. In the affiliated shop-selected song list adding step S24, the streaming server 2 adds the affiliated shop-selected song to the affiliated shop-selected song list 210.

[116] In the customer-requested song list adding step S30 shown in FIG. 6, the streaming server receives requested song information from the mobile terminal 4, and adds the requested song information to the customer-requested song list 220. After the step S30, the payment settlement flag in the payment detail DB 270 is set to an OFF state, and the payment information of the customer is recorded.

[117] The following descriptions are classified into the wireless Internet manner of the first embodiment and the SMS manner of the second embodiment.

[118] FIG. 8 is a flowchart illustrating that the streaming server 2 receives a requested song from the mobile terminal 4 of a customer by using wireless Internet according to the first embodiment.

[119] In the Wink service access receiving step SA31, the streaming server 2 receives a request for accessing the wireless Internet from the mobile terminal 4. In the full song list providing step SA32, the streaming server 2 provides the full song list and guides the customer to input a requested song. In the requested song information receiving step SA33, a specific music number input by the customer is received from the mobile terminal 4. In the affiliated shop identifier receiving step SA34, an affiliated shop identifier is received from the customer. In the customer-requested song list adding

step SA35, the received requested song information is added to the customer-requested song list 220.

- [120] As an additional option, in case the customer requests to register (or, record) a requested story in addition to the requested song, in the ARS guidance and voice requested story receiving step SA36, an automatic voice guidance is provided for informing the customer of the way of recording a requested story, and then the voice requested story of the customer is received from the mobile terminal 4. In the requested story DB storing step SA37, the requested story of the customer is stored in the requested story DB 250.
- [121] FIG. 9 is a flowchart illustrating that the streaming server 2 receives a requested song from the mobile terminal 4 of a customer by using SMS.
- [122] In the text message receiving step SB31, the streaming server 2 receives a text message of the customer including requested song information classified by a pre-determined identifier transmitted from the mobile terminal 4. In the identifier separating step SB32, the streaming server 2 separates the identifier from the requested song information. In case a music number is received, a singer name and a song title are obtained from the music DB 22. In the customer-requested song list adding step SB33, in case there exists a music file corresponding to the received requested song information, the requested song information is added to the customer-requested song list 220.
- [123] As an additional option, if the customer inputs a requested story in the received text message, in the text requested story separating step SB34, the text requested story of the customer is separated from the text message. In the TTS converting step SB35, the text requested story is converted into a voice requested story by using a TTS engine. In the requested story DB storing step SB36, the requested story converted into a voice format is stored in the requested story DB 250.
- [124] In the music file transmitting step S40 shown in FIG. 6, the streaming server 2 transmits a requested song in the customer-requested song list 220 to the affiliated shop terminal 3 prior to a selected song in the affiliated shop-selected song list 210. After the step S40, the payment settlement flag in the payment detail DB 270 is changed into an ON state so that the payment information of the customer will be charged. It will be described in more detail with reference to FIG. 10.
- [125] In the customer-requested song list inquiring step S41, the streaming server 2 preferentially inquires the customer-requested song list 220 rather than the affiliated shop-selected song list 210 when regeneration of a music file in the affiliated shop-selected song list 210 is to be started. If there is inquired a requested song, it is inquired from the requested story DB 250 whether the customer registered a requested story. If there is a requested story, in the requested story transmitting step S43, the inquired requested

story is transmitted to the affiliated shop terminal 3. In the customer-requested song music file transmitting step S44, a first requested song in the customer-requested song list 220 is transmitted. If there is no customer-requested song, in the affiliated shop-selected song music file transmitting step S45, the selected songs registered in the affiliated shop-selected song list 210 are transmitted according to a transmission order.

[126] In the service fee payment step S50 shown in FIG. 6, the payment information of a customer whose payment settlement flag of the payment detail DB 270 is changed into an ON state after the step S30 is settled in every month, and that is informed to the mobile communication service provider server. The mobile communication service provider server receives the service fee from the customer, and then transfers a money deducting a predetermined commission to a service provider of the streaming server 2.

[127] As mentioned above, the system and method for providing customer-requested songs using mobile terminals, which provides songs requested by customers in an affiliated shop according to the present invention, has been described based on the limited embodiments and drawings. However, it should be understood that the detailed description and specific examples, while indicating preferred embodiments of the invention, are given by way of illustration only, since various changes and modifications within the spirit and scope of the invention will become apparent to those skilled in the art from this detailed description.

Industrial Applicability

[128] The system and method for providing customer-requested songs using mobile terminals to provide songs requested by customers in an affiliated shop according to the present invention is a three-dimensional service integrating wire/wireless Internet, offline shops and customers, which makes a new integrated market model that overcomes a service system in the existing markets.

[129] In addition, since requested songs and requested stories are received from the streaming server, bi-directional communication is possible in which customers may participate, not using the conventional one-sided service, thereby supporting quality of service for customers. Moreover, it may meet the demand of customers who want to have a control for a certain media in a certain region.

[130] Also, an affiliated shop may give a song desired by a customer using a computer terminal having Internet and multimedia regeneration functions at a low cost though it is not equipped with DJ box or dedicated audio components as if the affiliated shop itself give the requested song and story to customers.

[131] Also, a customer may registers his/her own story in addition to the requested song to receive a service of the requested song in real time, and the customer may also transfer his/her own message by his/her own voice in a limited region of the affiliated

shop.

Claims

- [1] A system for providing customer-requested songs using mobile phones, which receives a requested song from a mobile terminal of a customer in an affiliated shop and provides the requested song to a corresponding affiliated shop terminal by means of streaming service in order to provide the requested song to the customer in the affiliated shop, the system comprising:
a streaming server for receiving a request for subscription from a shop and admitting the shop as an affiliated shop, receiving selected song information from the affiliated shop, receiving requested song information from customers, and transmitting music files based on the order set by the affiliated shop, the streaming server streaming a music file of the requested song prior to a music file of the selected song in case there is a requested song from the customer;
a mobile terminal for the customer to input and transmit the requested song information to the streaming server; and
an affiliated shop terminal for receiving a music file from the streaming server and regenerating the music file.
- [2] The system for providing customer-requested songs using mobile terminals according to claim 1,
wherein the streaming server receives the requested song information from the mobile terminal by means of wireless Internet communication.
- [3] The system for providing customer-requested songs using mobile terminals according to claim 1,
wherein the streaming server receives the requested song information from the mobile terminal by means of SMS (Short Message Service) communication.
- [4] The system for providing customer-requested songs using mobile terminals according to any of claims 1 to 3,
wherein the requested song information includes mobile phone user information, affiliated shop identifier, and music information.
- [5] The system for providing customer-requested songs using mobile terminals according to claim 2, wherein the streaming server includes:
a music DB (database) storing music numbers (or, music identifiers) and music files (or, sound source data);
an affiliated shop-selected song receiving unit for receiving the selected song information from the affiliated shop terminal via a wire/wireless network;
an affiliated shop-selected song list in which the affiliated shop-selected song receiving unit stores the selected song information;
a wireless Internet receiving unit for receiving a request for accessing wireless

Internet from the mobile terminal, providing full music contents thereto, and receiving the requested song information therefrom;
a customer-requested song list in which the wireless Internet receiving unit stores the requested song information; and
a requested song transmission unit for inquiring a corresponding music file from the music DB to find the requested song registered in the customer-requested song list prior to the affiliated shop-selected song list, and transmitting the music file to the affiliated shop terminal.

- [6] The system for providing customer-requested songs using mobile terminals according to claim 3, wherein the streaming server includes:
a music DB storing music numbers and music files;
an affiliated shop-selected song receiving unit for receiving the selected song information from the affiliated shop terminal via a wire/wireless network;
an affiliated shop-selected song list in which the affiliated shop-selected song receiving unit stores the selected song information;
a SMS receiving unit for receiving the requested song information from the mobile terminal through SMS;
a customer-requested song list in which the SMS receiving unit stores the requested song information; and
a requested song transmission unit for inquiring a corresponding music file from the music DB to find the requested song registered in the customer-requested song list prior to the affiliated shop-selected song list, and transmitting the music file to the affiliated shop terminal.

- [7] The system for providing customer-requested songs using mobile terminals according to claim 5, wherein the streaming server further includes:
an ARS (Automatic Response System) guidance unit providing an automatic guidance message to a customer when the wireless Internet receiving unit receives a request for mentioning a story from the customer, and then storing a voice story of the customer for the purpose of streaming the requested story related to the customer-requested song; and
a requested story DB in which the ARS guidance unit stores the requested story.

- [8] The system for providing customer-requested songs using mobile terminals according to claim 6, wherein the streaming server further includes:
a TTS (Text To Speech) converter for TTS-converting a text requested story included in a text message of the customer, received in the SMS receiving unit, to be converted into a voice requested story for the purpose of streaming the requested story related to the requested song of the customer; and
a requested story DB in which the TTS converter stores the requested story

converted into a voice data.

- [9] The system for providing customer-requested songs using mobile terminals according to claim 5 or 7, wherein the streaming server further includes:
a payment processing unit for receiving a requested song or a requested story by means of wireless Internet communication with the mobile terminal, informing of a request list of the customer and a service fee, receiving confirmation for payment from the customer, and settling the payment; and
a payment detail DB storing payment details processed by the payment processing unit.
- [10] The system for providing customer-requested songs using mobile terminals according to claim 6 or 8, wherein the streaming server includes:
a payment processing unit for receiving a requested song and a requested story by means of SMS with the mobile terminal, transmitting a call-back URL (Uniform Resource Locator) text message to inform of a request list of the customer, guide a service fee and obtain consents of the customer for the payment, receiving confirmation of the payment from the customer by means of access to the call-back URL, and settling the payment; and
a payment detail DB storing payment details processed by the payment processing unit.
- [11] The system for providing customer-requested songs using mobile terminals according to any of claims 1 to 3,
wherein the streaming server receives a requested song from the mobile terminal, and informing of the number of currently reserved requested songs and an expected streaming time.
- [12] The system for providing customer-requested songs using mobile terminals according to any of claims 1 to 3,
wherein the streaming server receives an appointed time set by the customer together with the requested song from the mobile terminal, and streaming the requested song at the corresponding appointed time.
- [13] A method for providing customer-requested songs using mobile phones, which receives a requested song from a mobile terminal of a customer in an affiliated shop and provides the requested song to a corresponding affiliated shop terminal by means of streaming service in order to provide the requested song to the customer in the affiliated shop, the method comprising:
(a) a streaming server receiving a request for subscription from the affiliated shop terminal, receiving affiliated shop information therefrom, storing the affiliated shop information in an affiliated shop information DB, and endowing an affiliated shop identifier thereto;

(b) the streaming server receiving selected song information from the affiliated shop terminal, and adding the selected song information to an affiliated shop-selected song list;

(c) the streaming server receiving requested song information from the mobile terminal, and adding the requested song information to a customer-requested song list; and

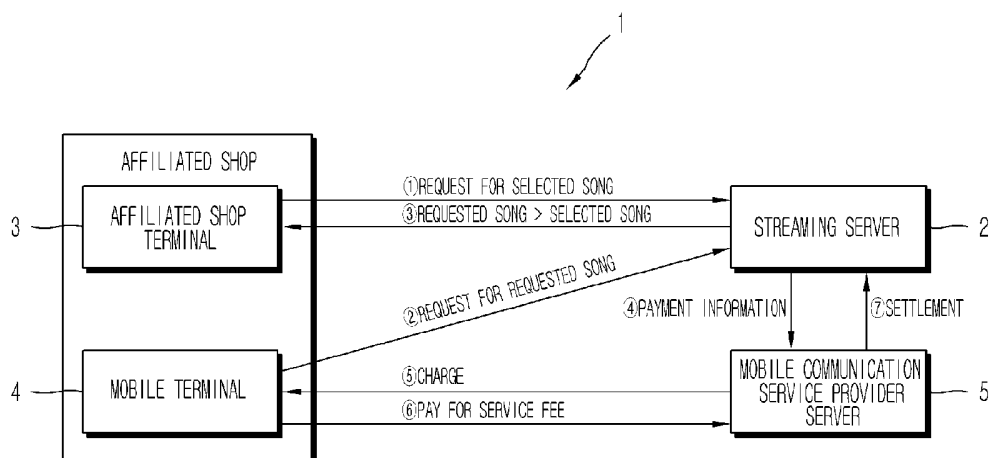
(d) the streaming server receiving a request for transmission of music files from the affiliated shop terminal, and transmitting the corresponding music files to the affiliated shop terminal with a requested song in the customer-requested song list being prior to the affiliated shop-selected song list.

- [14] The method for providing customer-requested songs using mobile phones according to claim 13, wherein, in the step (b), the streaming server receives a request for access through a dedicated program or a web browser installed in the affiliated shop terminal to process logging-in, receives specific selected song information selected by the affiliated shop among a full song list provided to the affiliated shop terminal, and adding the specific selected song to the affiliated shop-selected song list.
- [15] The method for providing customer-requested songs using mobile phones according to claim 13, wherein, in the step (c), the streaming server receives a request for access (or, a Wink service) to wireless Internet from the mobile terminal, providing a full song list to the mobile terminal, and receiving the requested song information of the customer.
- [16] The method for providing customer-requested songs using mobile phones according to claim 13, wherein, in the step (c), the streaming server receives the requested song information classified by identifiers from the mobile terminal by means of SMS communication.
- [17] The method for providing customer-requested songs using mobile phones according to claim 15, wherein, in the step (c), the streaming server provides an ARS voice guidance in addition to the requested song information from the mobile terminal, receives a voice requested story of the customer, and storing the voice requested story in a requested story DB.
- [18] The method for providing customer-requested songs using mobile phones according to claim 16, wherein, in the step (c), the streaming server receives from the mobile terminal a

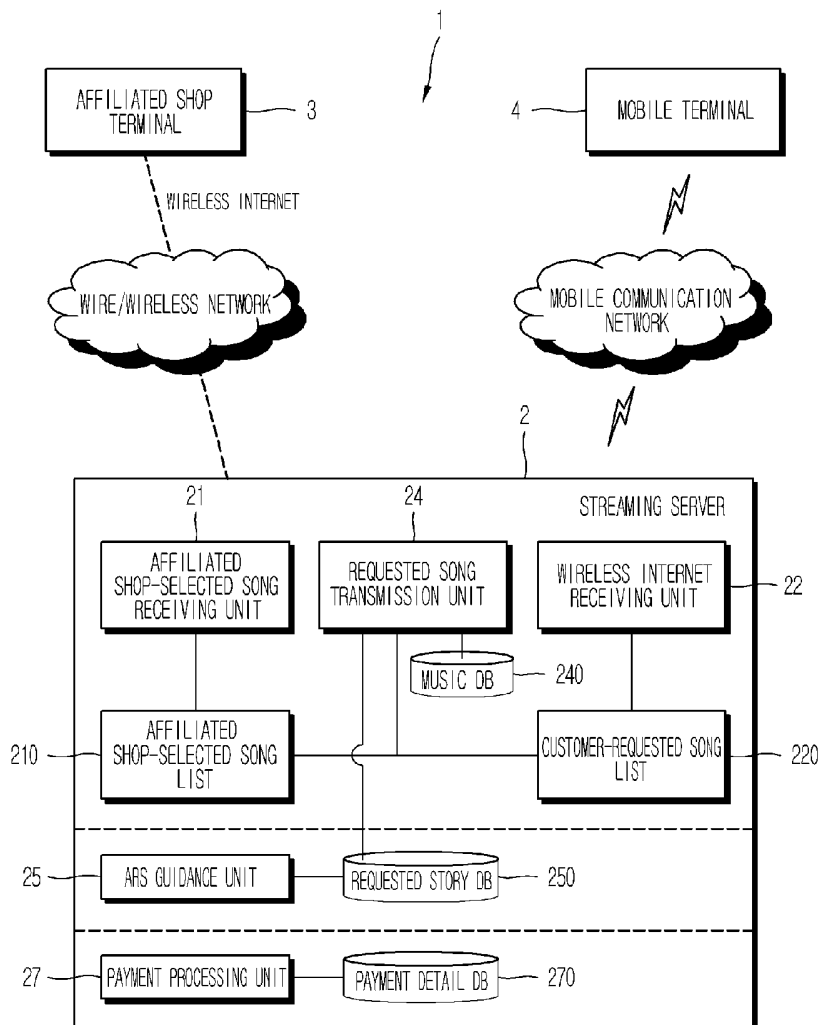
text message in which a requested story is added to the requested song information, removes the identifier from the text message to separate a text requested story, converts the text requested story into a voice requested story by means of TTS, and stores the voice story in a requested story DB.

- [19] The method for providing customer-requested songs using mobile phones according to claim 16 or 18, wherein, in the step (c), the streaming server receives a text message including the requested song information from the mobile terminal, and informs of a requested detail and a payment detail thereto by means of SMS or call-back URL text message.
- [20] The method for providing customer-requested songs using mobile phones according to claim 13, wherein the step (d) includes:
(d1) the streaming server inquiring the customer-requested song list preferentially when transmission of a new song data is initiated;
(d2) inquiring whether there is a requested story corresponding to a requested song, in case the requested song of a customer exists;
(d3) transmitting a corresponding requested story to the affiliated shop terminal from the requested story DB, in case the requested story exists;
(d4) the streaming server inquiring music files corresponding to the requested songs in the customer-requested song list from a music DB, and transmitting the music files to the affiliated terminal; and
(d5) in case there is no requested song of a customer in the step (d2), inquiring music files corresponding to the selected songs in the affiliated shop-selected song list from the music DB, and transmitting the music files to the affiliated terminal.
- [21] The method for providing customer-requested songs using mobile phones according to claim 20, wherein the step (d) further include the step of (e) differentially charging a service fee to customers according to transmission of a requested song or a requested story of the customer.

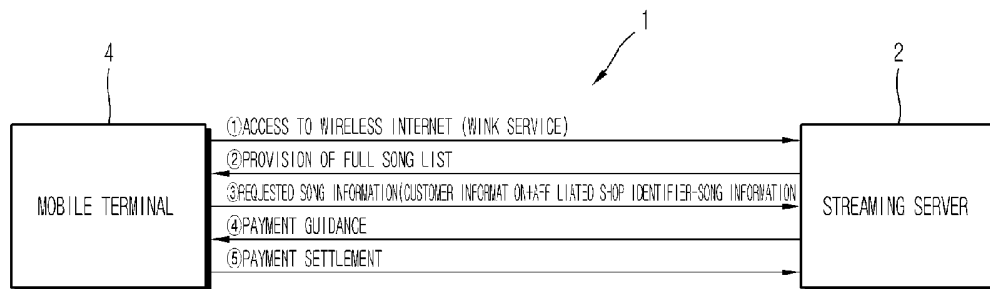
[Fig. 1]



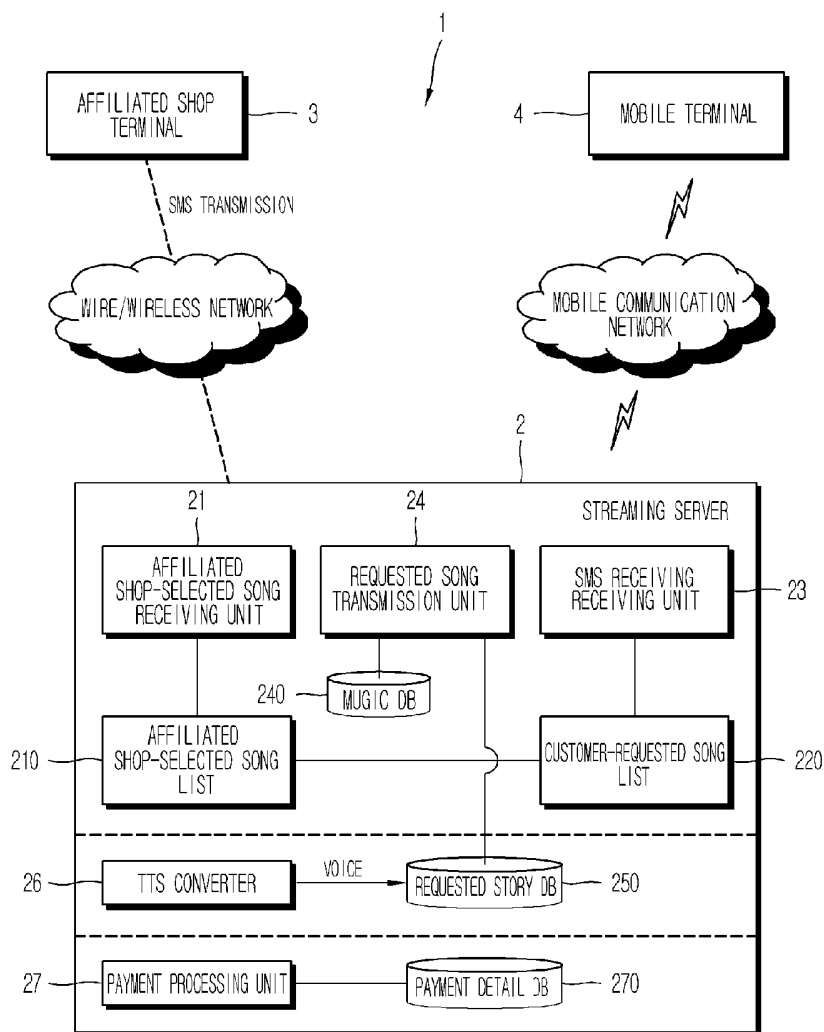
[Fig. 2]



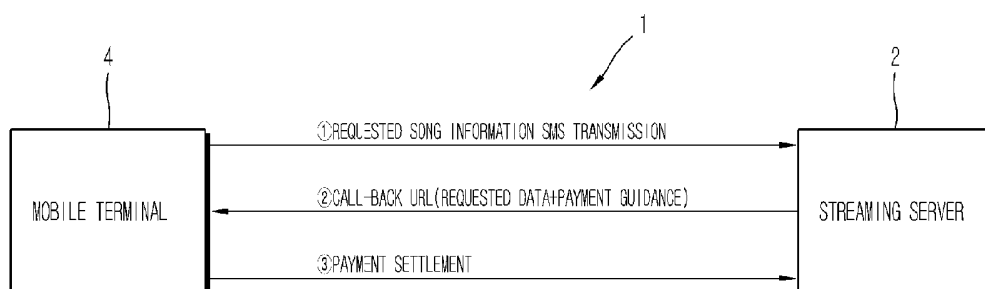
[Fig. 3]



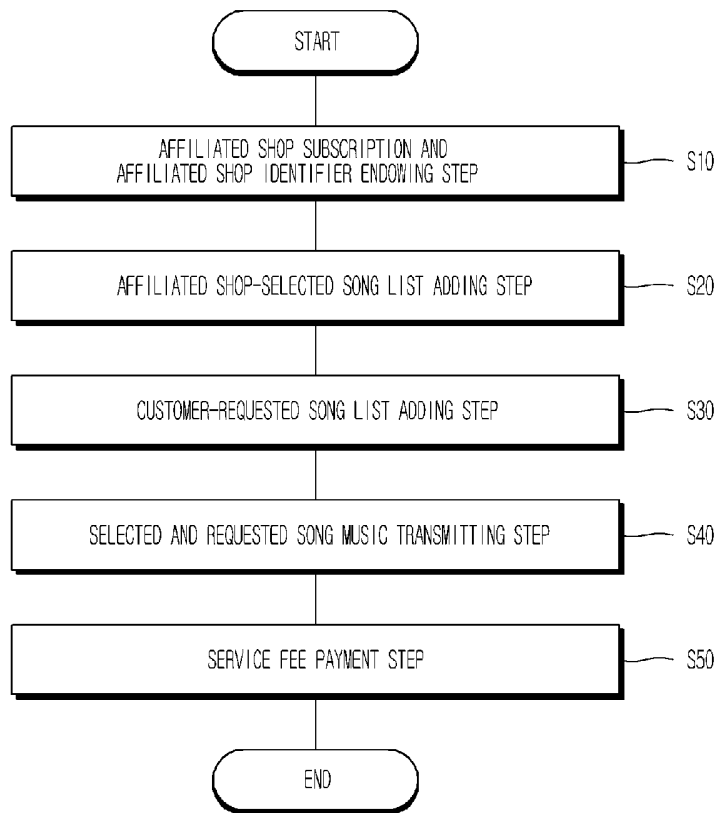
[Fig. 4]



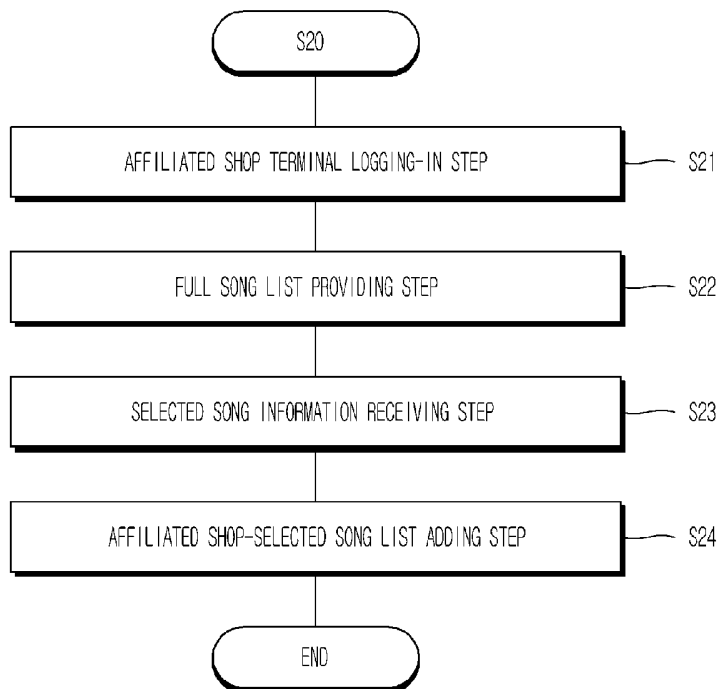
[Fig. 5]



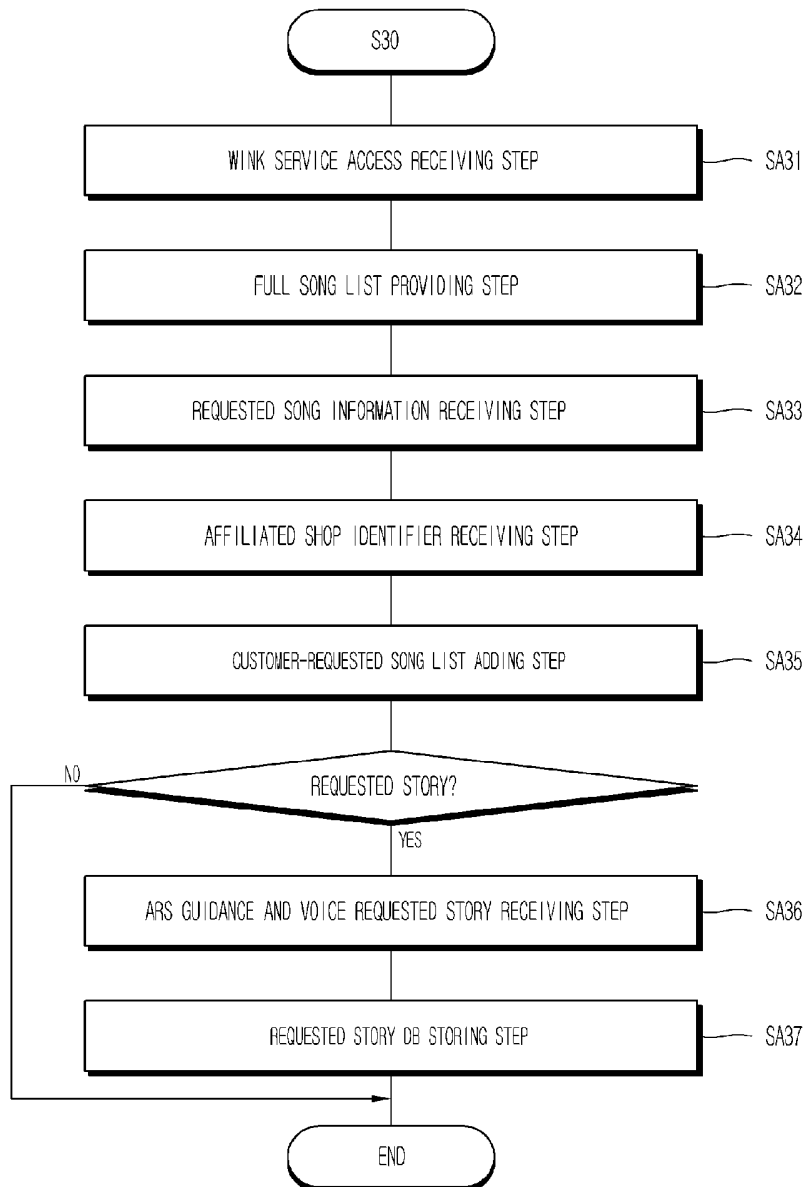
[Fig. 6]



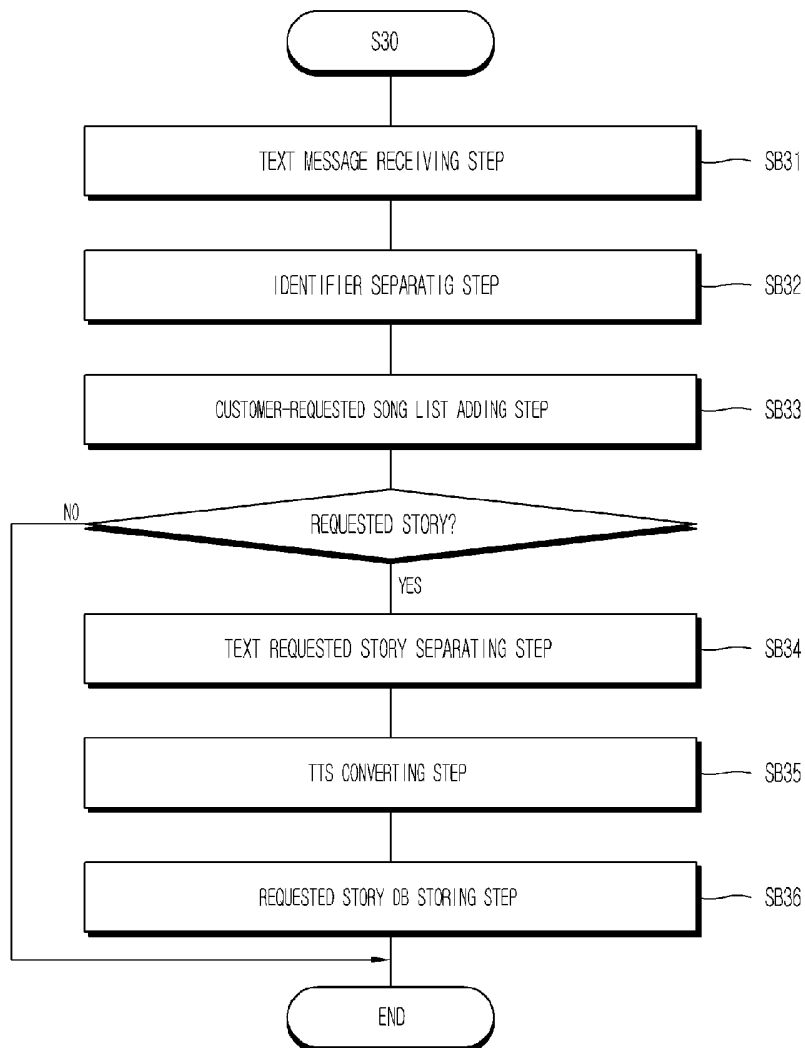
[Fig. 7]



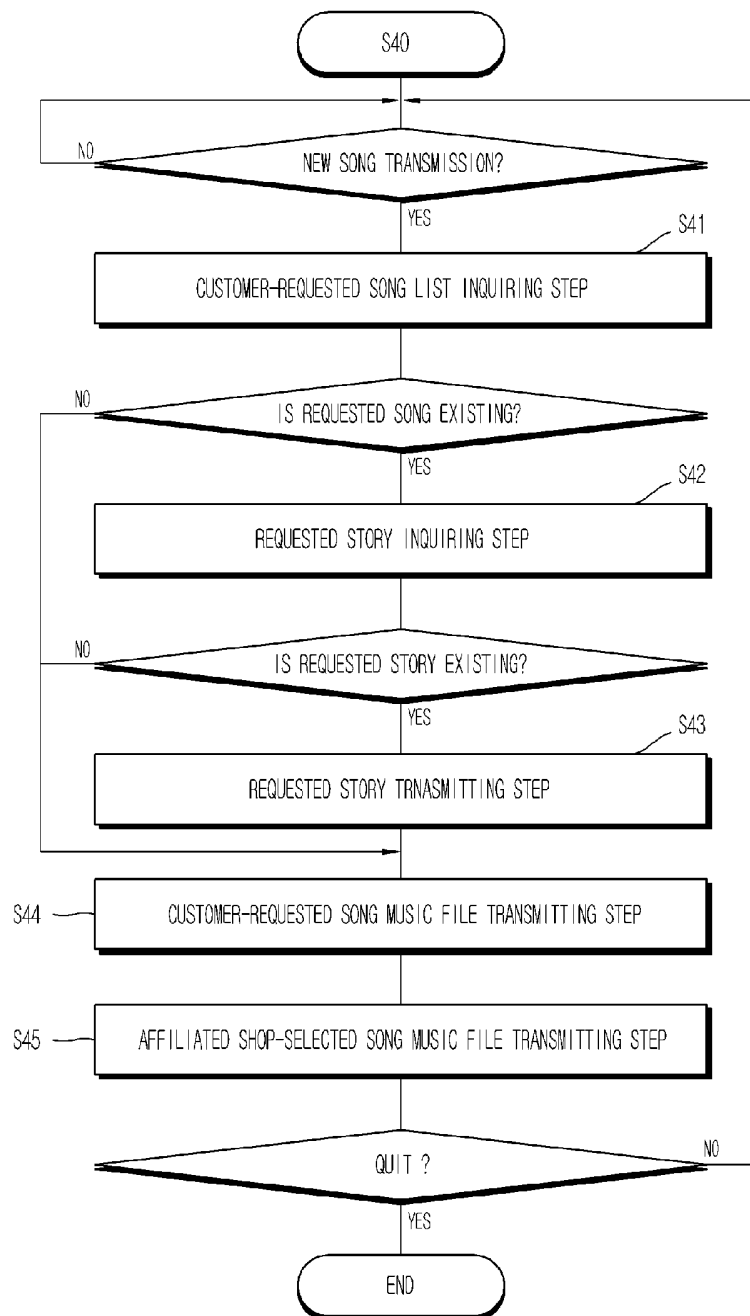
[Fig. 8]



[Fig. 9]



[Fig. 10]



INTERNATIONAL SEARCH REPORT

International application No.
PCT/KR2005/003521

A. CLASSIFICATION OF SUBJECT MATTER

G06F 17/00(2006.01)i

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)
IPC8 G06F 17/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
Korean patents and applications for inventions since 1975

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	KR 2001-87521 A (DASAN IT WORKS INC.) 21 SEP. 2002 SEE THE WHOLE DOCUMENTS	1-21
A	KR 2000-24660 A (HAN HUN-JOO ETR.) 6 MAY 2000 SEE THE WHOLE DOCUMENTS	1-21
A	KR 2001-93043 A (RENETECK INC.) 27 OCT. 2001 SEE THE WHOLE DOCUMENTS	1-21
A	KR 2000-72138 A (KIM JONG-YEOL) 5 DEC. 2000 SEE THE WHOLE DOCUMENTS	1-21

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

* Special categories of cited documents:

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