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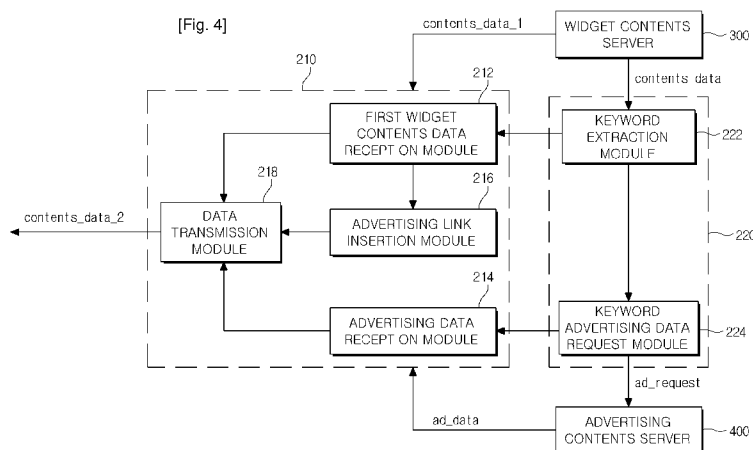
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(54) Title: SYSTEM OF PROVIDING ADVERTISING DATA USING ADVERTISEMENT WIDGET APPLICATION AND METHOD THEREOF



(57) Abstract: Provided are a system of providing advertising data using an advertisement widget application and a method thereof. A mobile terminal includes a plurality of widget applications including an advertisement widget application and can drive the plurality of widget applications. A widget contents server provides contents data provided to a user through the widget applications. An advertising contents server provides advertising data that are provided to the user through the advertisement widget application. A widget service server provides the contents data and the advertising data to the mobile terminal through a communication network. The widget service server extracts an advertising keyword from the contents data transmitted to the mobile terminal, requests to the advertising contents server the advertising data corresponding to the advertising keyword, and transmits the advertising data to the mobile terminal. The mobile terminal outputs the advertising data corresponding to the advertising keyword, which is contained in a text of the contents data displayed on the widget application activated by the user, through the advertisement widget application to the user.

Description

SYSTEM OF PROVIDING ADVERTISING DATA USING AD- VERTISEMENT WIDGET APPLICATION AND METHOD THEREOF

Technical Field

- [1] The present disclosure relates to a system of providing advertising data using advertisement widget application and method thereof, and more particularly, to a system of providing advertising data using advertisement widget application and method thereof, which are capable of effectively providing keyword advertisements to a user in a mobile widget environment.

Background Art

- [2] Widget application refers to a small program having a small data size and also refers to a variety of applications that is provided as a desktop icon in a PC environment and occupies a small space on background. A variety of widget applications have been developed. Examples of the widget applications include a widget application providing decorative effects, such as clock or picture frame function, and informative widget application, such as e-mail, RSS reception of specific homepage information, real-time weather information, and real-time quick news information.
- [3] Meanwhile, with development of IT technology, the data processing capacity and storage capacity of mobile communication terminals such as CDMA or GSM, IT devices such as PDA or notebook computer providing wireless data access function are extended. In addition, large-sized and high-quality display devices have been developed. Due to these developments of the mobile terminals, services have been proposed which can execute a variety of widget applications on the standby screen. In particular, "smart path" providing the service through the "intromobile" of the present applicant provides the function that can simultaneously drive a plurality of informative widget applications 152 and 154 as the standby application on the screen of the mobile terminal 100.
- [4] For example, a news widget application 152 receives news that is updated from news providing servers, such as newspaper company, news portal or broadcasting sites provided through the Internet, in a data push method or a data pull method, and provides the received news to the user. More specifically, the headline and summary of the news are transmitted to the mobile terminal in the data push method. When the user selects the corresponding headline of the news, details of the news are transmitted in the data pull method. In this way, the news contents can be updated.
- [5] A blog widget application receives contents that are updated into the user's blog

from the blog providing server providing the user's blog site in a data push method or a data pull method, and provides the received contents to the user. A weather widget application 112 receives weather information from a weather information providing server according to update periods, and provides the received weather information to the user.

- [6] In spite of various applicability, such a mobile-based widget application has a difficulty in providing a variety of large-capacity information due to limitation in performance of the mobile terminal different from the PC environment. In particular, in the case of advertising services via a communication network, the display screen size of the mobile terminal is limited and data access charge is high when data are transmitted and received via a wireless communication network. Thus, the advertising services are not actively provided.
- [7] The advertising service in the mobile environment may be provided by inserting advertising data into contents data themselves that are transmitted to the mobile terminal. However, such a method has a problem in that the user is charged with unnecessary communication fee because advertising data are contained in each contents data. In addition, it is difficult to expect wider advertisement effects because the advertisements are provided to only the mobile terminal receiving the contents data containing the advertising data. Therefore, it is difficult to expand the volume of mobile advertisement markets.
- [8] Furthermore, since the small display screen of the mobile terminal is divided into two areas: an area allocated to the contents data and an area allocated to the advertisement data, the contents data are not sufficiently displayed due to the occupied area of the advertising data, thus causing the inconvenience to the user.

Disclosure of Invention

Technical Problem

- [9] Therefore, an object of the present invention is to provide a system of providing advertising data using an advertisement widget application and a method thereof, in which a widget service server detects an advertising keyword from contents data transmitted to a user, and transmits the corresponding advertising data to the user. Thus, independently of contents providers, wide advertisement effects for a plurality of users can be expected by easily linking the advertising data corresponding to keywords of different kinds of contents data provided from a plurality of contents providers.
- [10] Another object of the present invention is to provide a system of providing advertising data using an advertisement widget application and a method thereof, which are capable of effectively transmitting advertising data, instead of a small display screen of the mobile terminal, because advertising data are provided through an ad-

vertisement widget application that is executed and terminated separately from widget applications providing contents data to the user.

[11] Other object of the present invention is to provide a system of advertising data using an advertisement widget application and a method thereof, in which a widget service server inserts advertising link into contents data in order to link the contents data with advertising data corresponding to advertising keyword, and then transmits the contents data. When the contents data containing the corresponding advertising link is provided to the user, the mobile terminal detects the advertising link, automatically drives the advertisement widget application, and provides the advertising data to the user, thereby increasing the advertisement effect and the rapid advertisement exposure.

[12] Other object of the present invention is to provide a system of advertising data using an advertisement widget application and a method thereof, in which an advertisement widget application can detect advertising keywords even when a plurality of widget applications contain different advertising keywords or one widget application contains a plurality of advertising keywords, and can rapidly and effectively provide the user with the advertising data corresponding to the respective advertising keywords.

[13] Other object of the present invention is to provide a system of advertising data using an advertisement widget application and a method thereof, in which the advertisement widget application calculates statistics data of advertising data provided to the user, and the system analyzes the advertisement effect in real time by using the advertisement statistics data, charges advertising fee to an advertiser, and provides a reward to the user according to advertisement exposure.

Technical Solution

[14] In accordance with an aspect of the present invention, there is provided a system of providing advertising data using an advertisement widget application, the system comprising: a mobile terminal comprising a plurality of widget applications including an advertisement widget application and driving the plurality of widget applications; a widget contents server for providing contents data provided to a user through the widget applications; an advertising contents server for providing advertising data that are provided to the user through the advertisement widget application; and a widget service server for providing the contents data and the advertising data to the mobile terminal through a communication network, wherein the widget service server extracts an advertising keyword from the contents data transmitted to the mobile terminal, requests to the advertising contents server the advertising data corresponding to the advertising keyword, and transmits the advertising data to the mobile terminal; and the mobile terminal outputs the advertising data corresponding to the advertising keyword,

which is contained in a text of the contents data displayed on the widget application activated by the user, through the advertisement widget application to the user.

- [15] In accordance with another aspect of the present invention, there is provided a method of providing advertising data in a system of providing advertising data using an advertisement widget application, wherein the system includes a mobile terminal driving a plurality of widget applications including an advertisement widget application, a widget contents server, an advertisement contents server, and a widget service server, the method comprising: (a) receiving, by the widget service server, contents data from the widget contents server and extracting advertising keyword; (b) requesting, by the widget service server, advertising data corresponding to the advertising keyword from the advertising contents server; (c) transmitting, by the widget service server, the contents data and the advertising data to the mobile terminal; (d) receiving, by the mobile terminal, the contents data and the advertising data; (e) monitoring, by the mobile terminal, if the advertising keyword is contained in the contents data of the activated widget application; and (f) driving the advertisement widget application when it is determined in the step (e) that the advertising keyword is contained, and providing the user with the advertising data corresponding to the advertising keyword.

Advantageous Effects

- [16] In a system of providing advertising data using an advertisement widget application and a method thereof according to an embodiment of the present invention, a widget service server detects an advertising keyword from contents data transmitted to a user, and transmits the corresponding advertising data to the user. Thus, independently of contents providers, wide advertisement effects for a plurality of users can be expected by easily linking the advertising data corresponding to keywords of different kinds of contents data provided from a plurality of contents providers.
- [17] In a system of providing advertising data using an advertisement widget application and a method thereof according to another embodiment of the present invention, advertisement data can be effectively transmitted, instead of a small display screen of the mobile terminal, because advertising data are provided through an advertisement widget application that is executed and terminated separately from widget applications providing contents data to the user.
- [18] In a system of advertising data using an advertisement widget application and a method thereof according to other embodiment of the present invention, a widget service server inserts advertising link into contents data in order to link the contents data with advertising data corresponding to advertising keyword, and then transmits the contents data. When the contents data containing the corresponding advertising link

is provided to the user, the mobile terminal detects the advertising link, automatically drives the advertisement widget application, and provides the advertising data to the user, thereby increasing the advertisement effect and the rapid advertisement exposure.

- [19] In a system of advertising data using an advertisement widget application and a method thereof according to other embodiment of the present invention, an advertisement widget application can detect advertising keywords even when a plurality of widget applications contain different advertising keywords or one widget application contains a plurality of advertising keywords, and can rapidly and effectively provide the user with the advertising data corresponding to the respective advertising keywords.
- [20] In a system of advertising data using an advertisement widget application and a method thereof according to other embodiment of the present invention, the advertisement widget application calculates statistics data of advertising data provided to the user, and the system analyzes the advertisement effect in real time by using the advertisement statistics data, charges advertising fee to an advertiser, and provides a reward to the user according to advertisement exposure.

Brief Description of the Drawings

- [21] FIG. 1 illustrates an exemplary execution screen of a widget application of a mobile terminal.
- [22] FIG. 2 illustrates an exemplary execution screen of an advertisement widget application according to an embodiment of the present invention.
- [23] FIG. 3 illustrates a system of providing advertising data according to an embodiment of the present invention.
- [24] FIG. 4 illustrates a detailed structure of a widget service server according to an embodiment of the present invention.
- [25] FIG. 5 illustrates a detailed structure of a mobile terminal according to an embodiment of the present invention.
- [26] FIG. 6 illustrates a process of navigating a plurality of widget applications of the mobile terminal.
- [27] FIG. 7 illustrates an exemplary execution screen of the advertisement widget application, depending on navigation between a plurality of widget applications, according to an embodiment of the present invention.
- [28] FIG. 8 illustrates an exemplary execution screen of the advertisement widget application, depending on a plurality of advertising keywords in one widget application, according to an embodiment of the present invention.
- [29] FIG. 9 illustrates an exemplary execution screen of the advertisement widget application by the advertising statistics calculating module according to an embodiment

of the present invention.

[30] FIG. 10 illustrates an exemplary execution screen of the advertisement widget control module according to an embodiment of the present invention.

[31] FIG. 11 is a flowchart illustrating a method of providing advertising data using an advertisement widget application according to an embodiment of the present invention.

Mode for the Invention

[32] Hereinafter, embodiments of the present invention will be described in detail with reference to the accompanying drawings.

[33] FIG. 3 illustrates a system of providing advertising data according to an embodiment of the present invention. The system of providing advertising data according to the embodiment of the present invention includes a mobile terminal 100, a widget contents server 300, an advertisement contents server 400, and a widget service server 200.

[34] The mobile terminal 100 includes a plurality of widget applications 150 having an advertisement widget application 140, and a function that can drive the plurality of widget applications 150. The mobile terminal 100 is a terminal that can connect to a wireless data network, such as a wireless LAN, a wireless Internet (Wibro, Wimax, HSDPA), and a wireless data network based on a mobile communication network, and it can be implemented with a portable wireless terminal, such as a mobile communication terminal with a communication device, PDA, or a notebook computer. As illustrated in FIG. 1, the mobile terminal 100 must have a widget driving function for driving a plurality of widget applications 152 and 154 on a screen at the same time.

[35] The widget contents server 300 functions to provide contents data contents_data, which are provided to a user through the widget applications 150. The widget contents server 300 may be specialized according to the widget applications 150 and established with a plurality of widget contents server 300, for example, a news widget contents server for providing news data corresponding to a news widget application, a weather widget contents server for providing weather information corresponding a weather widget application, and so on. The single widget contents server 300 may be established corresponding to the plurality of widget applications 150. The contents data contents_data may be generated in a data packet format and may include a variety of multimedia data, such as moving pictures, texts, images, and sound. The contents data contents_data may include supplementary information such as a widget application identifier for designating the corresponding widget application 150 of the mobile terminal 100. The contents data contents_data may be provided to the mobile terminal 100 by a transmission method, such as a data push of the widget contents server 300 or a data pull of the mobile terminal 100.

- [36] The advertisement contents server 400 functions to provide advertising data ad_data, which are provided to a user through the advertisement widget application 140. The advertising data ad_data are contents data specialized according to the advertisement widget application 140. For example, as illustrated in FIG. 2, the advertising data ad_data may be generated in a banner advertisement format containing images and texts, which are displayed by the advertisement widget application 140. In addition, the advertising data ad_data may be generated in a variety of data formats, for example, a multimedia advertisement format provided with moving picture and sound.
- [37] The widget service server 200 functions to provide the contents data contents_data and the advertising data ad_data to the mobile terminal 100 through a communication network. As illustrated in FIG. 3, the widget service server 200, the widget contents server 300, and the advertisement contents server 400 are the separate elements and may be designed such that they are connected together through the communication network. However, it is apparent to those skilled in the art that the respective servers 200, 300 and 400 may be implemented with a single server by integrating their functions or a server that performs multiple functions.
- [38] In order to provide an advertising service based on an advertising keyword ad_keyword, the widget service server 200 extracts the advertising keyword ad_keyword from the contents data contents_data transmitted to the mobile terminal 100, requests to the advertisement contents server 400 the advertising data ad_data corresponding to the advertising keyword ad_keyword, and transmits the advertising data ad_data to the mobile terminal 100.
- [39]
- [40] <Structure and operation of the widget service server>
- [41] FIG. 4 illustrates a detailed structure of the widget service server 200 according to an embodiment of the present invention. The widget service server 200 will be described below in detail with reference to FIG. 4.
- [42] The widget service server 200 may include a keyword extraction module 222, a keyword advertising data request module 224, an advertising link insertion module 216, and a data transmission module 218. The keyword extraction module 222 determines if the advertising keyword ad_keyword exists in the contents data contents_data received by the widget contents server 300. For example, the keyword extraction module 222 can extract the advertising keyword ad_keyword by storing a list of advertising keywords ad_keyword designating keyword advertisements, and searching if the advertising keyword ad_keyword exists in a text data field among the respective contents data contents_data.
- [43] The keyword advertising data request module 224 functions to request (ad_request) the advertisement contents server 400 to transmit to the mobile terminal 100 the ad-

vertising data ad_data corresponding to the extracted advertising keyword ad_keyword.

[44] According to this embodiment, the system of providing the advertising service is established separately from the widget contents server 300 and transmits the advertising data ad_data by extracting the advertising keyword ad_keyword from the contents data contents_data that will be transmitted from the widget service server 200, not the widget contents server 300. Therefore, aside from a contents provider, a widget service provider can gain additional profits from the advertising service. If the advertising service provider changes the advertising data ad_data corresponding to the advertising keyword ad_keyword, different advertising data ad_data can be transmitted for the same contents data.

[45] The advertising link insertion module 216 functions to insert an advertising link field ad_link_field into the advertising data ad_data in order to link the contents data contents_data with the advertising data ad_data corresponding to the advertising keyword ad_keyword when the advertising keyword (ad_keyword) data is extracted from the received contents data contents_data. The advertising link field ad_link_field serves as a field constituting data packet of the contents data contents_data and makes it easy to determine if the linked advertising data ad_data exists when the mobile terminal 100 provides the corresponding contents data contents_data. Meanwhile, the advertising link field ad_link_field may contain only information about the link with the advertising data ad_data, depending on a developer's design. In addition, the advertising link field ad_link_field may further contain the advertising data identifier ad_data_id for designating the corresponding advertising data ad_data. In this case, the mobile terminal 100 can search the advertising data ad_data corresponding to the advertising keyword ad_keyword more easily and quickly. Furthermore, the advertising link field ad_link_field may further contain the advertising keyword ad_keyword. In this case, the mobile terminal 100 can request the corresponding advertising data ad_data to the advertisement contents server 400 through the corresponding advertising keyword ad_keyword, or read the corresponding advertising data ad_data from an advertising data database 142.

[46] The data transmission module 218 functions to transmits the contents data contents_data and the advertising data ad_data to the mobile terminal 100. The data transmission module 218 transmits each data in a data packet format complying with a protocol of a communication network that the mobile terminal 100 uses.

[47]

[48] <Structure and operation of the mobile terminal>

[49] As illustrated in FIG. 2, the mobile terminal 100 functions to output the advertising data ad_data to the user through the advertisement widget application 140, wherein the

advertising data `ad_data` corresponds to the advertising keyword `ad_keyword` contained in the text of the contents data `contents_data` displayed in the widget application 150 activated by the user.

[50] FIG. 5 illustrates a detailed structure of the mobile terminal 100 according to an embodiment of the present invention. The mobile terminal 100 includes an advertising data database 142, a widget monitoring module 132, and an advertisement widget driving module 134.

[51] The advertising data database 142 functions to store the received advertising data `ad_data` on the basis of the advertising keywords. The advertising data database 142 can prevent repetitive transmission/reception of the same advertising keywords `ad_keyword` by previously storing the advertising data `ad_data` based on the advertising keywords `ad_keyword`. In addition, the advertising data database 142 can provide one advertising data `ad_data` according to the designation of the widget service server 200 or at random by storing a plurality of advertising data `ad_data` with respect to one advertising keyword `ad_keyword`.

[52] Meanwhile, in order to use the storage capacity of the mobile terminal 100 more efficiently, the advertising data database 142 may automatically delete the advertising data `ad_data` after a certain time elapses, just like a buffer, or may delete the advertising data `ad_data` in order of the stored time when the advertising data `ad_data` is stored with a capacity exceeding a designated storage capacity. That is, the advertising data database 142 first deletes the oldest advertising data `ad_data`.

[53] The widget monitoring module 132 functions to determine if the advertising link field `ad_link_field` is contained in the contents data `contents_data` provided from the currently activated widget application 150. It is preferable that the widget monitoring module 132 is designed to perform the corresponding function without user's separate manipulation by implementing it in a form of a program that automatically resides in a memory when the widget application 150 is driven.

[54] Meanwhile, as illustrated in FIG. 1, the plurality of widget applications 152 and 154 may be provided in an overlap form on the screen of the mobile terminal 100. However, in this case, the user's manipulation command input through a keypad is directly applied to only the currently activated widget application 152. The activated widget application 150 defined herein is the widget application 152 to which the user's manipulation command is directly applied among the plurality of widget applications 152 and 154 and which is displayed uppermost in order not to be overlapped among the overlapped widget applications 152 and 154.

[55] The advertisement widget driving module 134 functions to drive the advertisement widget application 140 when the widget monitoring module 132 detects the advertising link field `ad_link_field`. According to this embodiment, the advertisement widget ap-

plication 140 does not always occupy the screen, but restrictively occupies the screen only when it is driven by the advertisement widget driving module 134. Therefore, the user's displeasure due to senseless advertising data ad_data can be minimized. Since the advertising data ad_data related to contents contained in the contents data contents_data which the user is watching are provided, it is not a mere advertisement but informative advertisement. Thus, it provides an effect that can increase the user's response to advertisement.

[56] In this case, the advertisement widget application 140 receives the advertising data ad_data linked to the advertising link field ad_link_field from the advertising data database and provides the received advertising data ad_data to the user.

[57] For example, in case where the word "PMP" is designated as the advertising keyword ad_keyword and the user receives a news article containing a text "mobile phone, MP3, PMP, and on on~" through the news widget application 152, the widget monitoring module 132 recognizes that the text "PMP" contained in the contents data contents_data provided from the currently activated news widget application 152 is the advertising keyword ad_keyword, and then, the advertisement widget driving module 134 automatically drives the advertisement widget application 140. The advertisement widget application 140 searches the advertising data ad_data linked to the advertising keyword ad_keyword "PMP" from the advertising data database 142, and provides the user with the corresponding advertisement related to "PMP" as illustrated in FIG. 2.

[58] Meanwhile, as illustrated in FIG. 5, the respective elements of the mobile terminal 100 are functionally divided for convenience of explanation of the present invention. The respective elements of the mobile terminal 100 need not be physically divided. In the actual implementation, it is apparent to those skilled in the art that the respective elements may be integrated into a single structure or may be further subdivided.

[59] Preferably, the mobile terminal 100 may further include an advertising data request module 138 for requesting the corresponding advertising data ad_data to the advertisement contents server 400 when there exists no advertising data ad_data corresponding to the advertising keyword ad_keyword contained in the widget application 150. According to this embodiment, since the mobile terminal 100 directly requests the advertising data ad_data, the advertisement providing service can be smoothly provided even when a lot of advertising data ad_data cannot be stored due to the limitation in the storage capacity of the advertising data database 142.

[60] More preferably, as illustrated in FIG. 9, the mobile terminal 100 further includes an advertising statistics calculating module 136 for calculating the advertising statistics data ad_stat_data containing information on exposure number of the advertising data ad_data or information on exposure time of the advertising data ad_data provided to the user by the advertisement widget application 140. Preferably, the system of

providing the advertising data further includes an advertising execution statistics unit 500 for receiving the advertising statistics data `ad_stat_data` from the mobile terminal 100 and analyzing an effect of the advertising execution on the basis of the advertising data `ad_data`, and a charging processing unit 600 for charging an advertiser of the advertising data `ad_data` according to the advertising statistics data `ad_stat_data`, or providing a reward including at least one of a cyber money and a discount on a data access charge to the user of the mobile terminal 100 sending the advertising statistics data `ad_stat_data`.

[61] Since the screen of the mobile terminal 100 is small and narrow compared with a typical PC environment and unnecessary information is less, the mobile terminal 100 can provide the user with a very impressive advertisement compared with a typical on-line advertisement of the PC environment. The embodiment using the advertising statistics data `ad_stat_data` can immediately analyze the advertisement service and the advertisement effect and automate a series of processes for providing an advertising expense and the reward for the advertising exposure, thereby providing the increased advertisement effect on general users and providing the improved reliability of the advertising service to the advertiser.

[62]

[63] <Detailed function of the advertisement widget application>

[64] FIG. 6 illustrates a process of navigating a plurality of widget applications 152, 154 and 156. The user may sequentially select the widget applications 152, 154 and 156 activated using navigation keys or the like. The widget applications 152, 154 and 156 may include images and texts. The widget applications 154 and 156 contain the advertising keywords `ad_keyword` in the texts, and the widget application 152 does not contain the advertising keyword `ad_keyword` in the text.

[65] FIG. 7 illustrates the operation of the advertisement widget application 140 by the navigation between the plurality of widget applications 152, 154 and 156. When the user of the mobile terminal 100 drives the plurality of widget applications 152, 154 and 156 and the widget applications 154 and 156 contain different advertising keywords `ad_keyword`, it is preferable that the advertisement widget application 140 preferentially provides the user with the advertising data `ad_data` corresponding to the advertising keyword `ad_keyword` contained in the widget application 150 that is currently activated by the user.

[66] For example, as illustrated in FIG. 7, when a first widget application 154 providing the contents data `contents_data` containing a first advertising keyword `Keyword1` is activated, the advertisement widget application 154 is driven and the advertisement widget application 154 displays on the screen the advertising data `ad_data` corresponding to the first advertising keyword `Keyword1`. When the user activates a

second widget application 156 while the first widget application 154 is in the activated state, the advertisement widget application 154 displays on the screen the advertisement data `ad_data` corresponding to a second advertising keyword `Keyword2`, which is contained in the contents data `contents_data` provided from the second widget application 156.

[67] According to this embodiment, the advertisement effect can be further increased by immediately changing the advertising data `ad_data` related to the widget application 150 that is currently activated by the user according to the process of navigating the widget application 150.

[68] FIG. 8 illustrates an embodiment in which one widget application 154 contains a plurality of advertising keywords `Keyword1` and `Keyword2`. In this case, it is preferable that the advertisement widget application 140 sequentially provides the user with the advertising data `ad_data` corresponding to the plurality of advertising keywords, or preferentially provides the user with the advertising data `ad_data` corresponding to the advertising keyword `ad_keyword` contained in an item selected by the user.

[69] That is, when the widget application 150 currently activated by the user of the mobile terminal 100 contains at least two or more different advertising keywords `ad_keyword`, the advertisement widget application 140 may sequentially provide the user with the advertising data `ad_data` corresponding to the advertising keywords `ad_keyword` at certain time intervals.

[70] The following description will be made about the case where the advertising keywords `ad_keyword` are divided into a plurality of selectable items on the screen of the widget application 140. When at least two or more different advertising keywords `ad_keyword` are contained in the widget application 150, which is currently activated by the user of the mobile terminal 100, and the advertising keywords `ad_keyword` constitute individual items on the screen provided by the widget application 150, it is preferable that the advertisement widget application 140 preferentially provides the user with the advertising data `ad_data` corresponding to the advertising keyword `ad_keyword` contained in the item, which is currently selected the user.

[71] According to this embodiment, the advertisement effect can be increased through the further subdivided advertisements because a plurality of advertising data `ad_data` can be linked within one contents data `contents_data`.

[72] It is preferable that the screen of the advertisement widget application 140 is not relatively large in order to prevent the case where the user cannot smoothly receive the desired contents data `contents_data` due to the advertisement. However, such a case has a problem in that the information on the details of the advertising materials cannot be transmitted to the user.

- [73] In order to solve the problem, it is preferable that the advertising data `ad_data` further includes information on acquisition of the detail advertising data `detail_ad_data` by at least one of a method for further including URL information for acquiring the detail advertising data `detail_ad_data` that contains the detail advertising information of the advertising materials, a method for including data access information for requesting the transmission of the detail advertising data `detail_ad_data`, and a method for including identification information of the detail advertising data `detail_ad_data` for identifying the detail advertising data `detail_ad_data`, which is transmitted together with the advertising data `ad_data`.
- [74] In this case, when the user receiving the advertising data `ad_data` requests the detail information, the advertisement widget application 140 further provides the corresponding detail advertising data `detail_ad_data`. In this way, the further detail advertising information can be transmitted to the user.
- [75] Meanwhile, when the user does not want to receive the advertising data `ad_data` through the advertisement widget application 140, it is preferable to disable the corresponding function. To this end, as illustrated in FIG. 10, the mobile terminal 100 may further include an advertisement widget control module (not shown) for controlling the advertisement widget application 140 to enable or disable the function of providing the advertising data `ad_data`.
- [76] Meanwhile, it is preferable that the advertisement widget application 140 further performs a top-most function for preventing the advertisement widget application 140 from being overlapped by the occupied area of other widget application 150 on the screen of the mobile terminal 100. To this end, the advertisement widget application 140 may be designed such that it is executed on the screen while it is not overlapped by the occupied area of other widget application 150, which is executed on the screen when the advertising data `ad_data` is provided.
- [77]
- [78] <Method of providing the advertising data using the advertisement widget application>
- [79] FIG. 11 illustrates a method of providing the advertising data using the advertisement widget application 140 according to an embodiment of the present invention.
- [80] In the method, advertising data are provided using the system of providing advertising data using the advertisement widget application 140, wherein the system includes a mobile terminal 100 driving a plurality of widget applications 150 including an advertisement widget application 140, a widget contents server 300, an advertisement contents server 400, and a widget service server 200. In the step S10, the widget service server 200 receives contents data `contents_data` from the widget

contents server 300 and extracts advertising keyword ad_keyword.

[81] In the step S20, the widget service server requests advertising data ad_data corresponding to the advertising keyword ad_keyword from the advertising contents server 400. In the step S30, the widget service server transmits the contents data contents_data and the advertising data ad_data to the mobile terminal 100.

[82] In the step S40, the mobile terminal 100 receives the contents data contents_data and the advertising data ad_data. In the step S50, the mobile terminal 100 monitors if the advertising keyword ad_keyword is contained in the contents data contents_data of the activated widget application 150. In the step S60, the advertisement widget application 140 is driven when it is determined in the step S50 that the advertising keyword ad_keyword is contained, and the advertising data ad_data corresponding to the advertising keyword ad_keyword is provided to the user as illustrated in FIG. 2.

[83] The step S30 inserts an advertising link field ad_link_field into the contents data contents_data, when the advertising keyword (ad_keyword) data is extracted from a first contents data contents_data received by the widget contents server 300, in order to link the contents data contents_data with the advertising data ad_data, and transmits the contents data contents_data. The step S50 determines if the advertising keyword ad_keyword is contained according to the existence or non-existence of the advertising link field ad_link_field. The step S60 provides the user with the advertising data ad_data corresponding to the advertising keyword ad_keyword by using the advertising link field ad_link_field.

[84] Furthermore, in order to provide detail advertising information to the user, the step S30 inserts information on acquisition of detail advertising data detail_ad_data into the advertising data ad_data in order to acquire detail advertising data detail_ad_data containing information on details of the advertising materials. The method further includes the step (not shown) of acquiring, by the advertisement widget application 140, the detail advertising data detail_ad_data according to the information on the acquisition of the detail advertising data detail_ad_data.

[85] Finally, in order to monitor the advertisement effect from the advertisement widget application 150 and performing a charging process, the method further includes: the step S70 of calculating, by the mobile terminal 100, advertising statistics data ad_stat_data containing at least one of information on exposure number of the advertising data ad_data and information on exposure time of the advertising data ad_data provided to the user by the advertisement widget application 140; the step (not shown) of collecting, by an advertising executing statistics unit 500, the advertising statistics data ad_stat_data from the plurality of mobile terminals 100 through a communication network, and analyzing an effect of advertising execution on the basis of the advertising data ad_data; and the step (not shown) of charging, by a charging

processing unit 600, an advertiser of the advertising data ad_data according to the advertising statistics data ad_stat_data, or providing a reward including at least one of a cyber money and a discount on a data access charge to the user of the mobile terminal sending the advertising statistics data.

Claims

- [1] A system of providing advertising data using an advertisement widget application, the system comprising:
a mobile terminal comprising a plurality of widget applications including an advertisement widget application and driving the plurality of widget applications;
a widget contents server for providing contents data provided to a user through the widget applications;
an advertising contents server for providing advertising data that are provided to the user through the advertisement widget application; and
a widget service server for providing the contents data and the advertising data to the mobile terminal through a communication network,
wherein the widget service server extracts an advertising keyword from the contents data transmitted to the mobile terminal, requests to the advertising contents server the advertising data corresponding to the advertising keyword, and transmits the advertising data to the mobile terminal; and
the mobile terminal outputs the advertising data corresponding to the advertising keyword, which is contained in a text of the contents data displayed on the widget application activated by the user, through the advertisement widget application to the user.
- [2] The system in accordance with claim 1, wherein the widget service server comprises:
a keyword extraction module for determining if the advertising keyword exists in the contents data received by the widget service server; and
a keyword advertising data request module for requesting the advertising contents server to transmit to the mobile terminal the advertising data corresponding to the extracted advertising keyword.
- [3] The system in accordance with claim 2, wherein the widget service server comprises:
an advertising link insertion module for inserting an advertising link field into the advertising data in order to link the contents data with the advertising data corresponding to the advertising keyword when the advertising keyword data is extracted from the contents data; and
a data transmission module for transmitting the contents data and the advertising data to the mobile terminal.
- [4] The system in accordance with claim 3, wherein the mobile terminal comprises:
an advertising data database for storing the received advertising data on the basis of the advertising keywords;

a widget monitoring module for determining if the advertising link field is contained in the contents data provided from the currently activated widget application; and

an advertisement widget driving module for driving the advertisement widget application when the widget monitoring module detects the advertising link field, wherein the advertisement widget application receives the advertising data linked to the advertising link field from the advertising data database and provides the received advertising data to the user.

- [5] The system in accordance with any one of claims 1 to 4, wherein, when the user of the mobile terminal drives the plurality of widget applications and the respective widget applications contain different advertising keywords, the advertisement widget application preferentially provides the user with the advertising data corresponding to the advertising keyword contained in the widget application that is currently activated by the user.
- [6] The system in accordance with any one of claims 1 to 4, wherein, when the widget application currently activated by the user of the mobile terminal contains at least two or more different advertising keywords, the advertisement widget application sequentially provides the user with the advertising data corresponding to the advertising keywords at certain time intervals.
- [7] The system in accordance with any one of claims 1 to 4, wherein, when at least two or more different advertising keywords are contained in the widget application, which is currently activated by the user of the mobile terminal, and the advertising keywords constitute individual items on the screen provided by the widget application, the advertisement widget application preferentially provides the user with the advertising data corresponding to the advertising keyword contained in the item, which is currently selected the user.
- [8] The system in accordance with any one of claims 1 to 4, wherein the mobile terminal further comprises an advertising data request module for requesting the advertising data to the advertisement contents server when there exists no advertising data corresponding to the advertising keyword contained in the widget application.
- [9] The system in accordance with any one of claims 1 to 4, wherein the advertising data further comprises information on acquisition of detail advertising data by at least one of a method for further including URL information for acquiring detail advertising data that contains detail advertising information of the advertising materials, a method for including data access information for requesting the transmission of the detail advertising data, and a method for including identification information of the detail advertising data for identifying the detail ad-

vertising data, which is transmitted together with the advertising data, wherein the advertising widget application further provides the corresponding detail advertising data when the user receiving the advertising data requests the detail information.

- [10] The system in accordance with any one of claims 1 to 4, wherein the mobile terminal further comprises an advertising statistics calculating module for calculating advertising statistics data containing information on exposure number of the advertising data or information on exposure time of the advertising data provided to the user by the advertisement widget application, and the system further comprises:
an advertising execution statistics unit for receiving the advertising statistics data from the mobile terminal and analyzing an effect of advertising execution on the basis of the advertising data; and
a charging processing unit for charging an advertiser of the advertising data according to the advertising statistics data, or providing a reward including at least one of a cyber money and a discount on a data access charge to the user of the mobile terminal sending the advertising statistics data.
- [11] The system in accordance with any one of claims 1 to 4, wherein the mobile terminal further comprises an advertisement widget control module for controlling the advertisement widget application to enable or disable the function of providing the advertising data.
- [12] The system in accordance with any one of claims 1 to 4, wherein the advertisement widget application is executed on the screen such that the advertisement widget application is not overlapped by an occupied area of other widget application, which is executed on the screen when the advertising data is provided.
- [13] A method of providing advertising data in a system of providing advertising data using an advertisement widget application, wherein the system includes a mobile terminal driving a plurality of widget applications including an advertisement widget application, a widget contents server, an advertisement contents server, and a widget service server, the method comprising:
(a) receiving, by the widget service server, contents data from the widget contents server and extracting advertising keyword;
(b) requesting, by the widget service server, advertising data corresponding to the advertising keyword from the advertising contents server;
(c) transmitting, by the widget service server, the contents data and the advertising data to the mobile terminal;
(d) receiving, by the mobile terminal, the contents data and the advertising data;

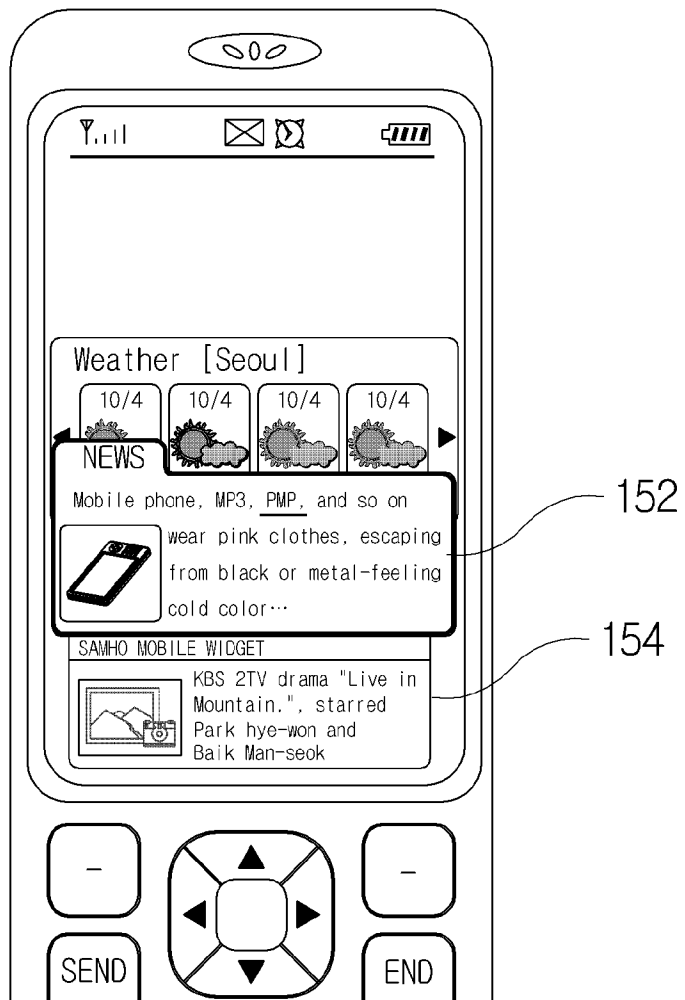
(e) monitoring, by the mobile terminal, if the advertising keyword is contained in the contents data of the activated widget application; and
(f) driving the advertisement widget application when it is determined in the step (e) that the advertising keyword is contained, and providing the user with the advertising data corresponding to the advertising keyword.

[14] The method in accordance with claim 13, wherein the step (c) comprises inserting an advertising link field into the contents data, when the advertising keyword data is extracted from a first contents data received by the widget contents server, in order to link the contents data with the advertising data corresponding to the advertising keyword, and transmits the contents data; the step (e) comprises determining if the advertising keyword is contained according to the existence or non-existence of the advertising link field; and the step (f) comprises providing the user with the advertising data corresponding to the advertising keyword by using the advertising link field.

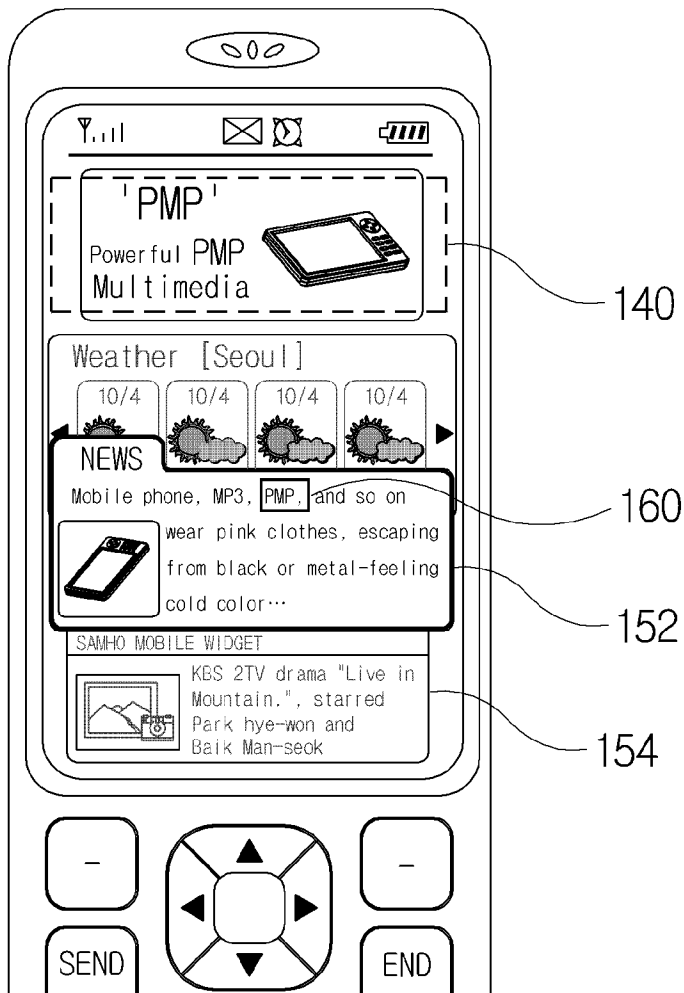
[15] The method in accordance with claim 13 or 14, wherein the step (c) comprises inserting information on acquisition of detail advertising data into the advertising data in order to acquire detail advertising data containing information on details of the advertising materials, and the method further comprises:
(g) acquiring, by the advertisement widget application, the detail advertising data according to the information on the acquisition of the detail advertising data.

[16] The method in accordance with claim 13 or 14, further comprising:
(h) calculating, by the mobile terminal, advertising statistics data containing at least one of information on exposure number of the advertising data and information on exposure time of the advertising data provided to the user by the advertisement widget application;
(i) collecting, by an advertising executing statistics unit, the advertising statistics data from the plurality of mobile terminals through a communication network, and analyzing an effect of advertising execution on the basis of the advertising data; and
(j) charging, by a charging processing unit, an advertiser of the advertising data according to the advertising statistics data, or providing a reward including at least one of a cyber money and a discount on a data access charge to the user of the mobile terminal sending the advertising statistics data.

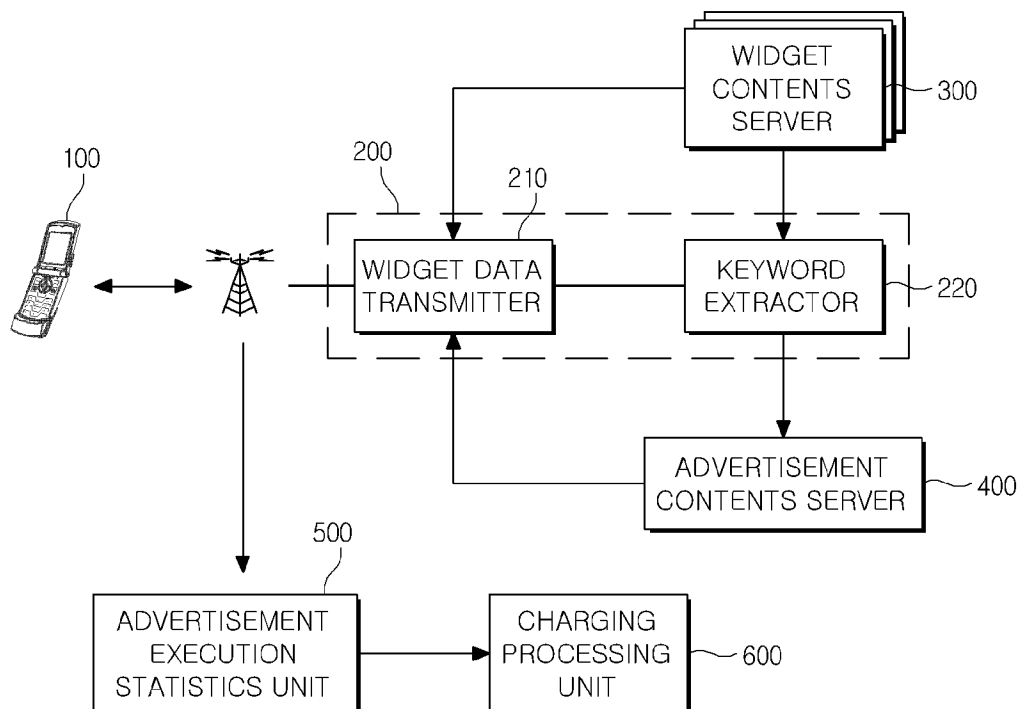
[Fig. 1]



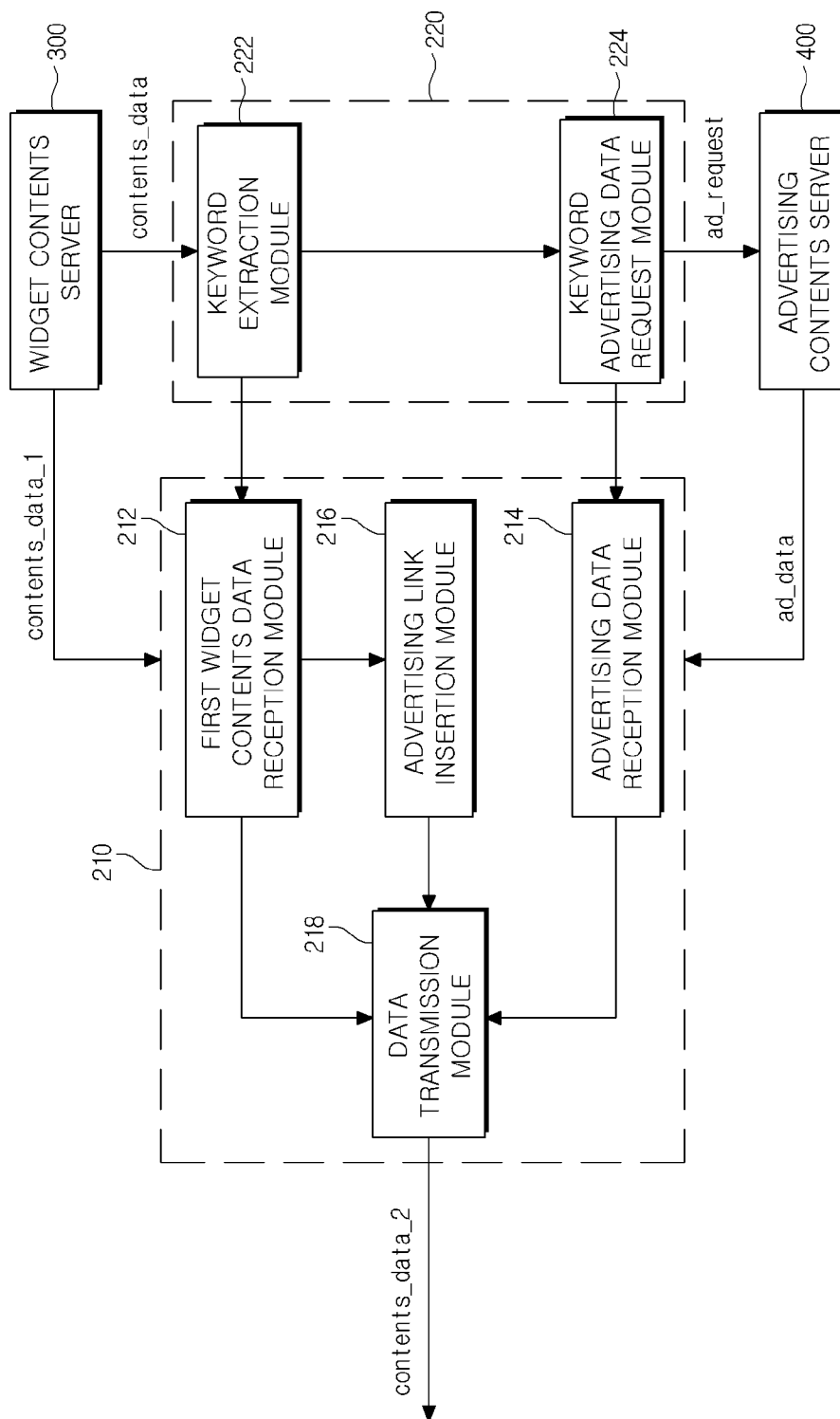
[Fig. 2]



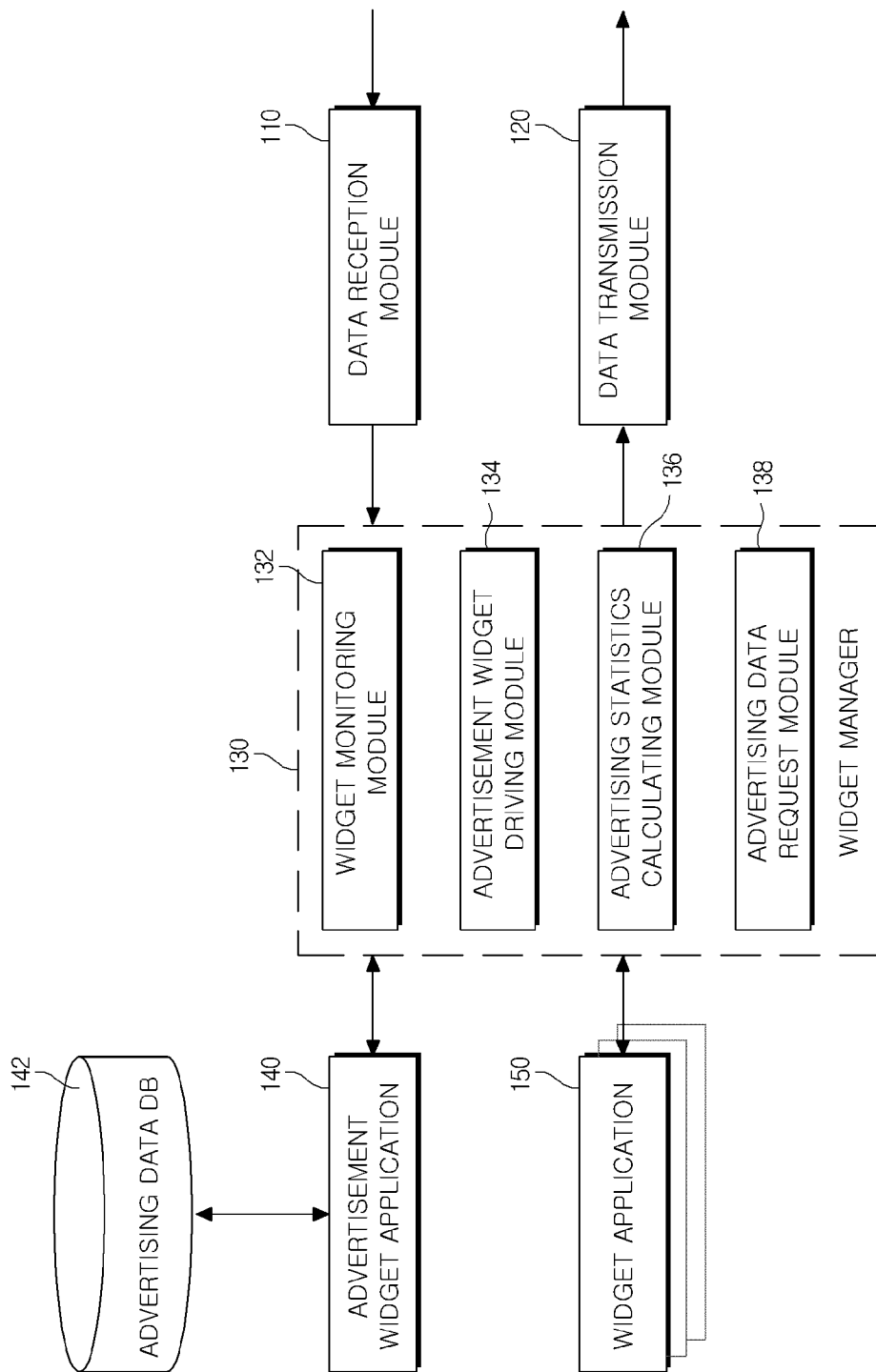
[Fig. 3]



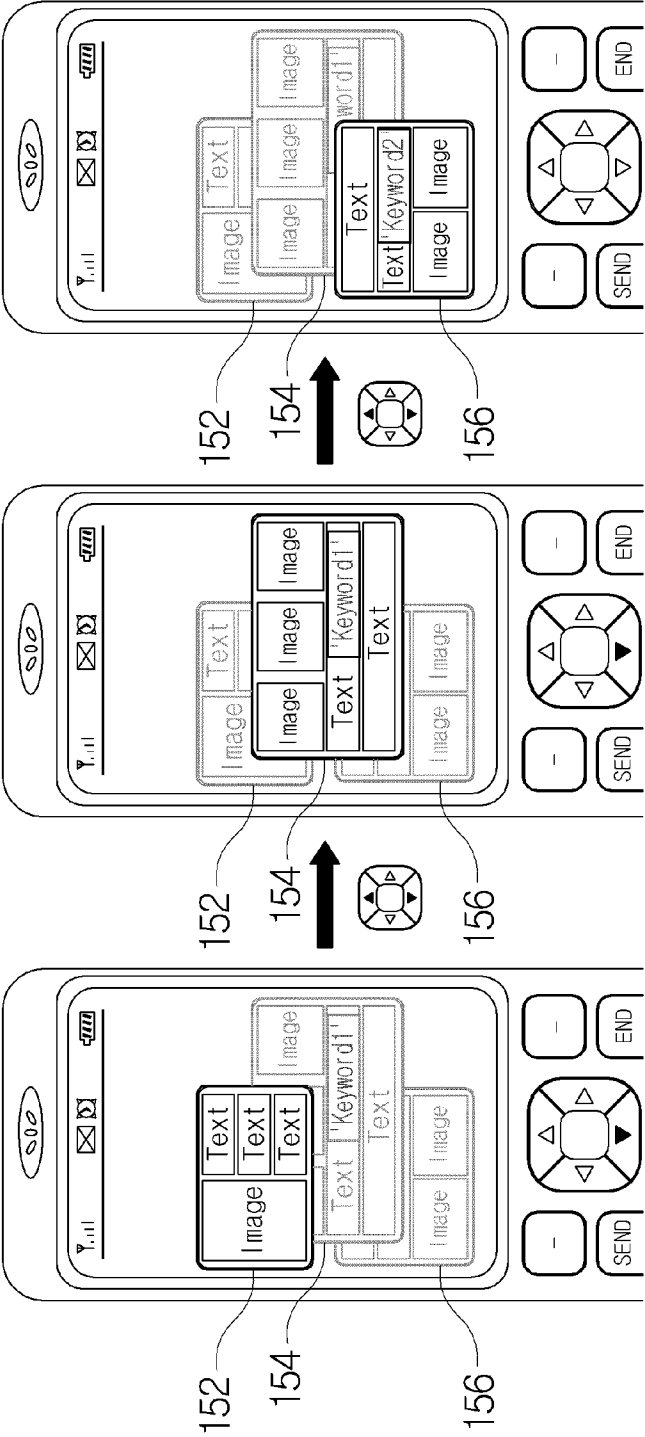
[Fig. 4]



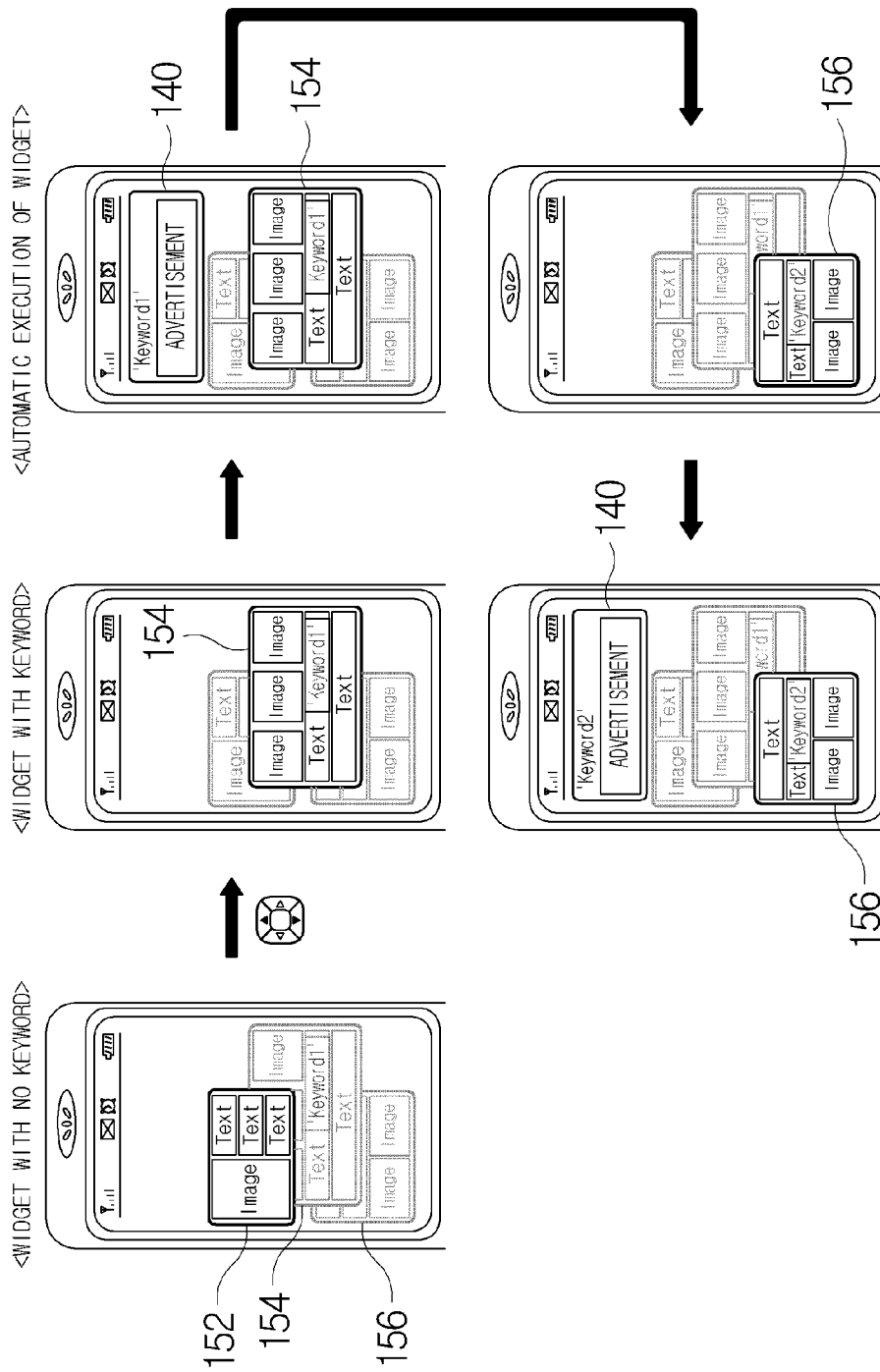
[Fig. 5]

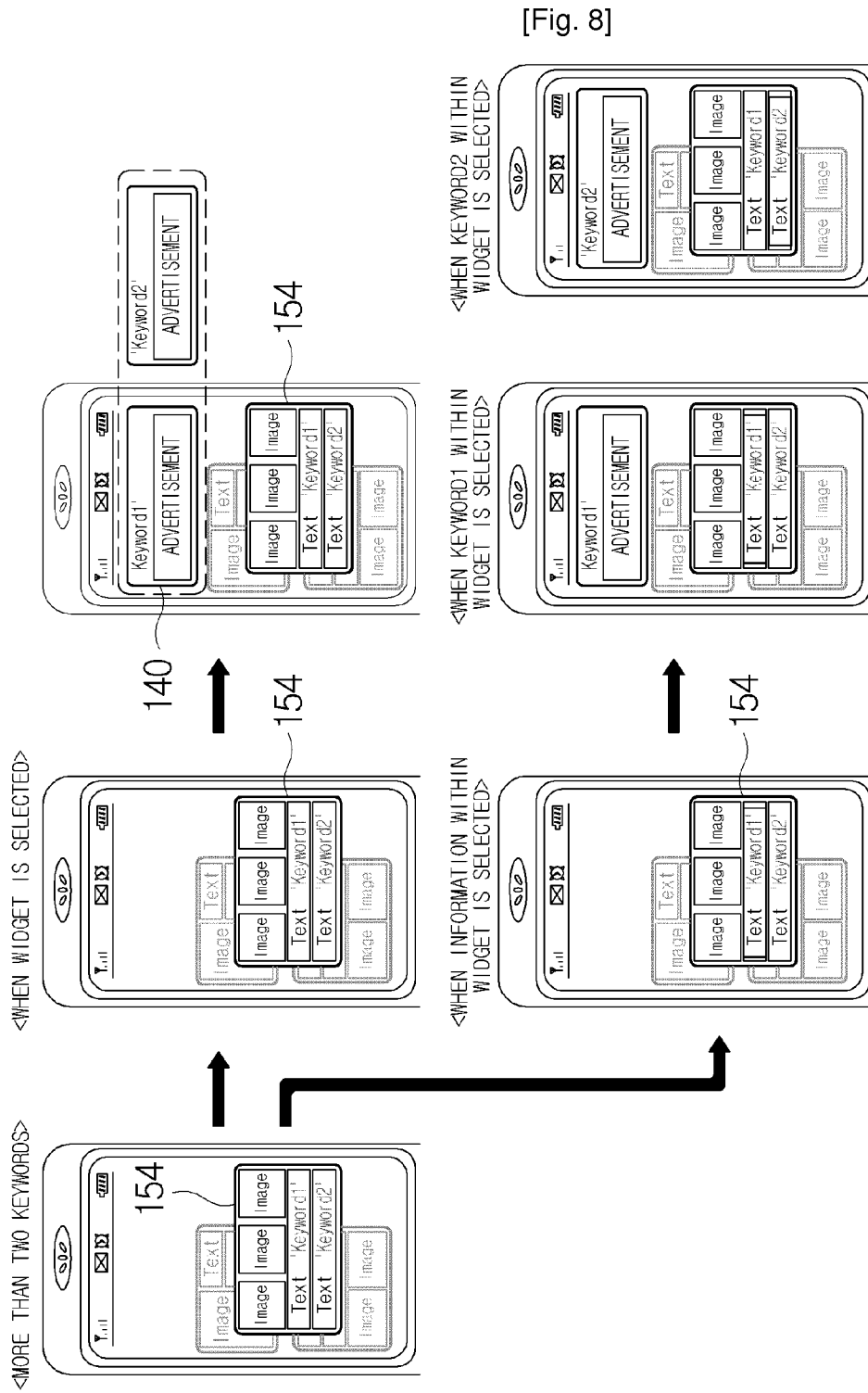


[Fig. 6]

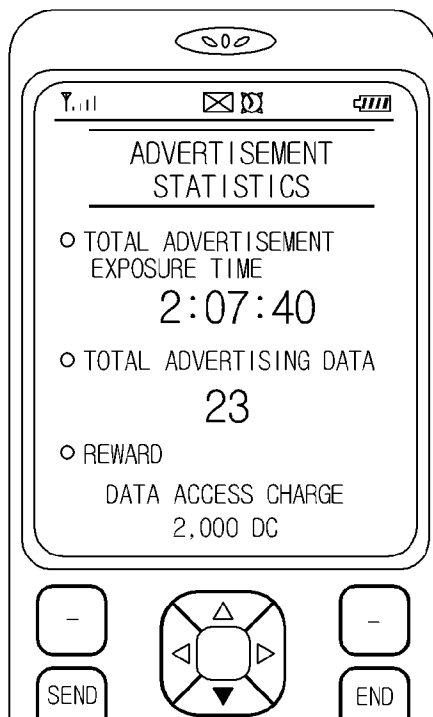


[Fig. 7]

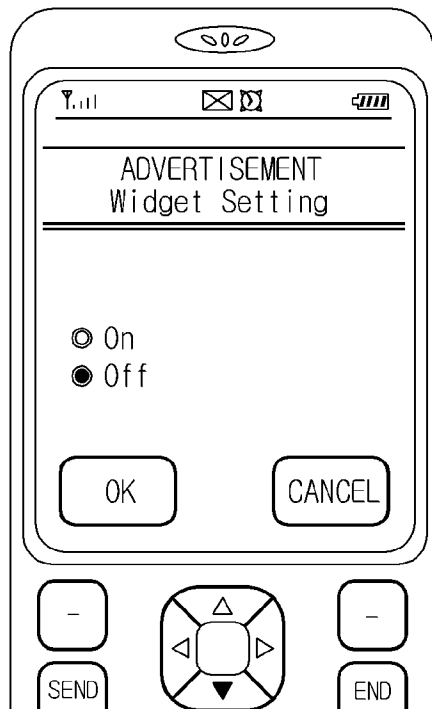




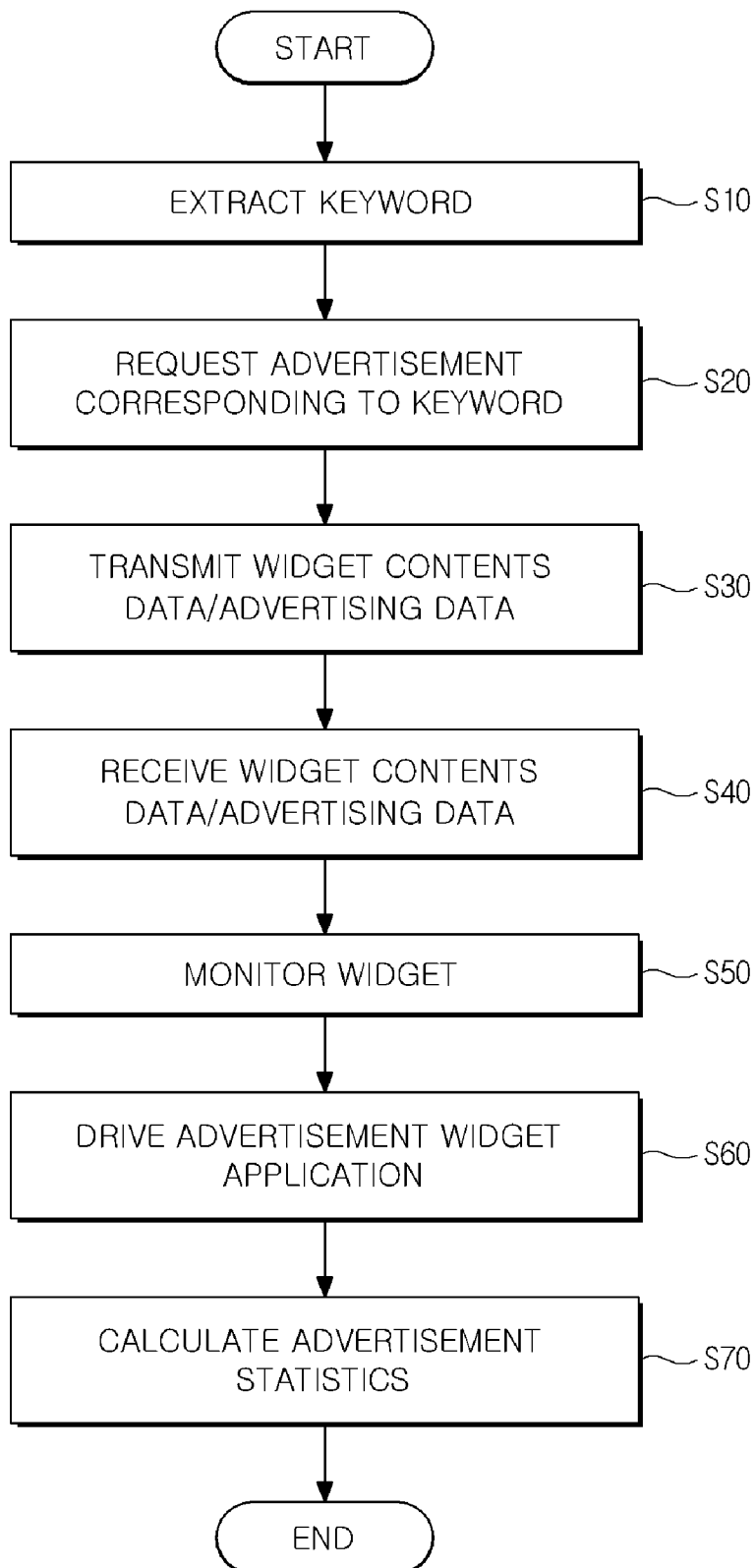
[Fig. 9]



[Fig. 10]



[Fig. 11]



A. CLASSIFICATION OF SUBJECT MATTER**G06Q 99/00(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)

IPC 8 G06F19/00, G06F17/00, G06Q10/00~99/00

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

Korean Utility models and applications for Utility models since 1975

Japanese Utility models and applications for Utility models since 1975

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

PAJ, FPD, USPAT, eKIPASS(KIPO internal) "Keyword: representative human model, measurement, and similar terms"

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	KR 10-2003-0084811 A (KIM, SANG HO) 1 NOVEMBER 2003 See abstract; page 2, line 44-page 3,line 56; claims 1, 2 and 4; figure 4.	1-16
Y	KR 10-2007-0029389 A (M FUTURE CO., LTD.) 14 MARCH 2007 See abstract; claims 7 and 19; figure 1.	1-16
Y	KR 10-2004-0087233 A (CHANG, YOUNG SEOK) 13 OCTOBER 2004 See abstract; claims 1-10; figure 1.	1-16



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:

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"&" document member of the same patent family

Date of the actual completion of the international search

07 AUGUST 2008 (07.08.2008)

Date of mailing of the international search report

07 AUGUST 2008 (07.08.2008)

Name and mailing address of the ISA/KR

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Telephone No. 82-42-481-8652



INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/KR2008/002000

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
KR 10-2003-0084811A	01. 11. 2003	None	
KR 10-2007-029389 A	14.03.2007	None	
KR 10-2004-0087233 A	13. 10. 2004	None	