(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
24 January 2002 (24.01.2002)

PCT

(10) International Publication Number
WO 02/07030 A1

(51) International Patent Classification[7]: G06F 17/60

(21) International Application Number: PCT/KR01/01212

(22) International Filing Date: 13 July 2001 (13.07.2001)

(25) Filing Language: Korean

(26) Publication Language: English

(30) Priority Data:

2000-40499	14 July 2000 (14.07.2000)	KR
2001-3343	20 January 2001 (20.01.2001)	KR
2001-42152	12 July 2001 (12.07.2001)	KR

(71) Applicant *(for all designated States except US)*: **COWEN** [KR/KR]; 127-19 Nonhyun-dong, Kangnam-gu, Kangnam-gu, Seoul 135-010 (KR).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **NAM, Kyung-Sik** [KR/KR]; 130-2 Namchang-dong, Paldal-gu, Suwon-si, Gyeonggi-do 442-030 (KR). **SON, Bek-Seung** [KR/KR]; 70-6 Dongpe-ri, Gyoha-myeon, Paju-si, Gyeonggi-do 413-833 (KR).

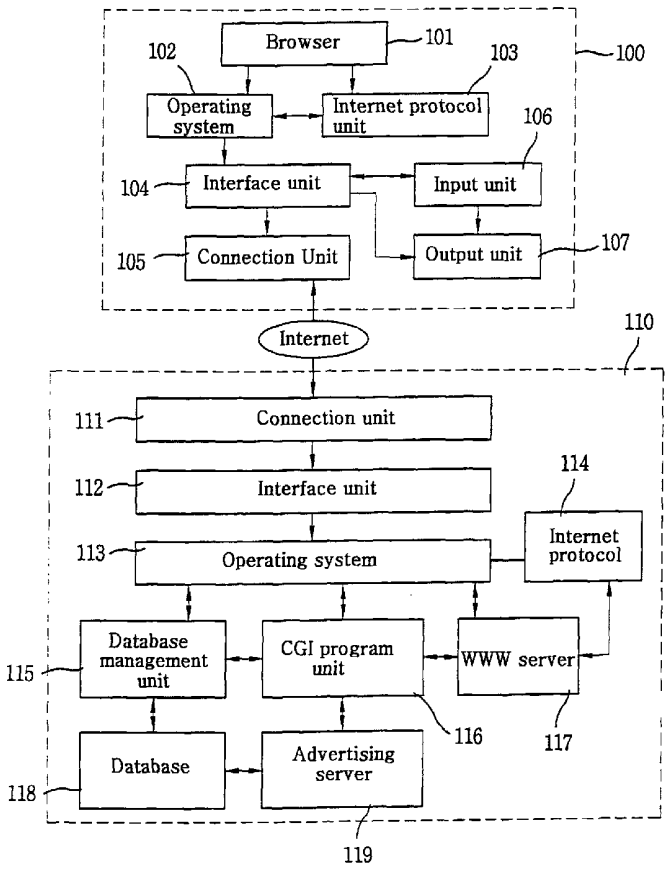
(74) Agents: **KIM, Dong-Jin** et al.; 3rd Fl. Seonggok Bldg., 823-22 Yeoksam-dong, Gangnam-gu, Seoul 135-080 (KR).

(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(84) Designated States *(regional)*: ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE,

[Continued on next page]

(54) Title: INTERNET ADVERTISING SYSTEM AND METHOD



(57) Abstract: The present invention relates to an internet advertising system and method, and more particularly, to an internet advertising system and method by which an advertisement is selected depending on user's fields of interest and the characteristics of a web page, a list of selected advertisements is then prepared for posting of the advertisements, and the advertisements are provided at loading time generated upon switching of the web page. An object of the present invention is to place an advertisement on the internet without a delay of data loading. An internet advertising method according to the present invention comprises the steps of inputting a web site address by a user; transmitting, by a web server, information on the user to an advertising server; searching by the advertising server, a cookie depending on the user information; searching and displaying, by the advertising server, a relevant advertisement depending on the searched cookie information; and stopping the advertisement if a web page is completely loaded, and returning to a web browser window. According to the present invention, there is an advantage in that an advertising effect can be maximized by performing a target advertising with respect to a specific user.

WO 02/07030 A1

IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:

— *with international search report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNET ADVERTISING SYSTEM AND METHOD

Technical Field

The present invention relates to an internet advertising system and method, and more particularly, to an internet advertising system and method by which an advertisement is selected depending on user's fields of interest and the characteristics of a web page, a list of selected advertisements is then prepared for posting of the advertisements, and the advertisements are provided at loading time generated upon switching of the web page.

Background Art

A conventional internet advertising usually includes a banner advertising. The banner advertising has a disadvantage in that it does not have an effect of a target advertisement since it places all types of advertisements regardless of user's fields of interest.

Also, the banner advertising does not attract user's attention to such an extent that the click rate per impression (exposure) in the banner advertising is about 0.7 %. Further, since loading time is lengthened due to the advertising during movement of a web page or information search, the banner advertising causes inconvenience to a user.

Disclosure of Invention

An object of the present invention is to place an advertisement on the internet without a delay of data loading.

Another object of the present invention is to eliminate user's tedium by displaying an advertisement during loading time generated upon switching of a web page, and to increase an advertising effect by displaying an advertisement related to user's fields of interest.

A further object of the present invention is to increase the advertising effect and to minimize displeasure of the 'netizens' by displaying an advertisement with

respect to one site only once.

In order to accomplish the above objects, the present invention provides an internet advertising system including a terminal device and a server device, the terminal device having an input unit for receiving information from a user, an output unit, an interface unit, an internet protocol unit, a browser, an operating system for controlling the components and a connection unit connected to an internet network, and the server device having a connection unit connected to the internet network, an interface unit, an internet protocol unit, a WWW server, a CGI program unit, a database and an operating system for controlling the components. The internet advertising system comprises a database for storing information on a list of user's fields of interest or characteristics of a web page; a database for storing an advertisement table made based on the information; and a device for displaying an advertisement to the user based on the advertisement table.

An internet advertising method according to the present invention may comprise the steps of storing information on a list of user's fields of interest or characteristics of a web page in a database; making an advertisement table based on the information and then storing the advertisement table in the database; and displaying an advertisement to the user based on the advertisement table.

The step of displaying the advertisement to the user may further comprise the steps of causing the advertisement to sleep on a screen; displaying the advertisement on the screen if an event which requires loading time exceeding a predetermined period of time is generated or immediately when the event is generated; and extinguishing or causing the advertisement to sleep at the same time when the event is completely loaded.

In the internet advertising method according to the present invention, the advertisement may include voice or various sound stimulation effects.

In the internet advertising method according to the present invention, if a site is a membership site, the list of the user's fields of interest based on member information may be stored in the database; and if the site is a non-membership site, the characteristics of the page may be stored in the database.

The step of extinguishing or causing the advertisement to sleep at the same time when the event is completely loaded may comprise the steps of causing the advertisement to sleep in order to execute the same advertisement table; and finishing the advertisement in order to transmit new different advertisement table.

Further, the present invention is directed to an internet advertising method wherein attention of a user is called by employing voice and sound stimulation in the advertisement without requiring an additional application program. The present invention can increase the transfer speed and reduce a delay of loading by storing the voice and sound stimulation in a buffer, and simultaneously transmitting them when images and texts of the web page are provided.

Another internet advertising method according to the present invention may comprise the steps of inputting a web site address by a user; transmitting, by a web server, information on the user to an advertising server; searching, by the advertising server, a cookie depending on the user information; searching and displaying, by the advertising server, a relevant advertisement depending on the searched cookie information; and stopping the advertisement if a web page is completely loaded, and returning to a web browser window.

The step of searching, by the advertising server, the cookie depending on the user information may comprise the steps of, if the site is a non-membership site, checking characteristics of the site visited by the user and storing them in the cookie; searching an advertisement using the information stored in the cookie; and transmitting a relevant advertisement.

The step of searching, by the advertising server, the cookie depending on the user information may comprise the steps of, if a search engine is used, checking a search key word which the user intends to search and storing it in the cookie; and searching an advertisement corresponding to the key word and transmitting a relevant advertisement to the user.

The step of searching and displaying, by the advertising server, the relevant advertisement depending on the searched cookie information may comprise the step of, if the web page has not been yet loaded even after the advertisement is finished,

searching and displaying another advertisement which has not been viewed by the user until the web page is completely loaded.

The cookie may search an advertisement suitable for the user's taste by using the user information, and search and store the type and the number of times of view of the advertisement that has been previously viewed by the user in order to prevent repetitive display of the advertisement.

Brief Description of Drawings

FIG. 1 is a view showing the constitution of an internet advertising system according to the present invention.

FIG. 2 is a flowchart for generally showing processes of the internet advertising method according to a first embodiment of the present invention.

FIG. 3 is a flowchart for generally showing processes of the internet advertising method according to a second embodiment of the present invention.

FIG. 4 is a flowchart for specifically showing the processes of the internet advertising method according to the first embodiment of the present invention.

FIG. 5 is a flowchart for specifically showing the processes of the internet advertising method according to the second embodiment of the present invention.

FIG. 6 is a flowchart for specifically showing processes of the internet advertising method according to a third embodiment of the present invention.

FIG. 7 is a flowchart for showing processes of the internet advertising method according to a fourth embodiment of the present invention.

FIG. 8 is a flowchart for showing processes of the internet advertising method according to a fifth embodiment of the present invention.

FIG. 9 is a flowchart for showing processes of the internet advertising method according to a sixth embodiment of the present invention.

FIG. 10 is a flowchart for explaining a process of displaying an advertisement in the internet advertising method according to the fourth to sixth embodiments of the present invention.

Best Mode for Carrying Out the Invention

Hereinafter, preferred embodiments of an internet advertising system and method thereof according to the present invention will be explained in detail with reference to the accompanying drawings.

FIG. 1 shows the constitution of an internet advertising system according to the present invention.

The system includes an ordinary terminal device 100 and a server device 110 for transmitting data. In the terminal device 100, an input unit 106 is connected to an interface unit 104 for outputting inputted contents to relevant units. The input unit 106 includes a keyboard, a mouse and the like. The terminal device includes an operating system 102 connected to an output terminal of the interface unit 104, and an internet protocol unit 103 operated by the operating system 102. The operating system 102 drives relevant components to cause them to process the contents inputted via the interface unit 104. The internet protocol unit 103 is used to designate all the protocols used on the internet and is required for receiving services via the internet. The terminal device includes a browser 101 which is driven by the operating system and can be connected with the internet by means of the internet protocol unit. The browser functions to display all searched documents and advertisements on the internet on a screen so that a user can view them. The terminal device includes a connection unit 105 connected between the interface unit 104 and the internet, and an output unit 107 connected to the interface unit 104. The connection unit 105 includes a modem, a network adaptor, etc. for connection to an internet network. The output unit 107 includes various devices such as a monitor, for displaying the contents searched by the browser and the advertisement.

Meanwhile, the server device includes a connection unit 111, an interface unit 112, an operating system 113 and an internet protocol unit 114, of which the operations are similar to those of the relevant components in the terminal device 100, respectively. In other words, the server device includes the connection unit 111 connected to the internet, and the interface unit 112 for outputting inputted contents to relevant components. Also, the server device includes the operating system 113 for

driving the relevant components to cause them to process the contents inputted via the interface unit, and the internet protocol unit 114. The server device includes a WWW server 117 which is activated by the operating system 113 and operated on the internet protocol unit 114. The WWW server 117 transmits data requested by the browser according to the Hyper Text Transfer Protocol (HTTP). The HTTP defines a communication protocol between the browser and the server. The server device further includes a CGI program unit 116 connected between the WWW server 117 and a database management unit 115. The database management unit 115 is operated by the operating system 113 and refers to a database 118 to output data needed for driving the CGI program unit 116. The server device includes the database connected to the database management unit. The database outputs data needed for the database management unit 115 or stores data inputted via the database management unit 115. An advertising server 119 stores an advertisement table made on the basis of the stored data so that a pertinent advertisement can be rapidly transmitted.

The structure of a database needed for the internet advertising method according to first to third embodiments of the present invention is as follows.

In case of a membership site, as can be seen from Tables 1 and 2 below, when a user wants to subscribe to the site, his/her fields of interest are checked through a questionnaire, and the list and priority of the fields of interest are then mapped.

Table 1

ID	Name	Age	...	Fields of Interest
bs-son	Baik-Seung SON	30	...	1,3,6

Table 2

List	Priority
Dance	1
Travel	2
Reading	3
Shopping	4
...	...

Based on this record field, the advertisement table consisting of class numbers, advertisement image, audio and URL (uniform resource locator) as shown in Table 3 is made for each user and is then stored in the database. The advertisement can be selectively displayed depending on the sex, age, region, occupation, etc. of the user by referring to the database.

Table 3

xxx member

Class Number	Advertisement Image	Audio	URL
1	OO Dance Institute	'Meong' sung by Hyun-Jeong KIM	xxx.xxx.xx.x
2	?? Book Store	Sound of Wood Block	???.???.??
...	...	...	...

In case of a non-membership site, that is, an anonymous site, a table like Table 4 below is stored in the database depending on the characteristics of a web page. This record field in Table 4 consists of URL, page number, audio, image, and the like.

Table 4

URL	Page Number	Audio	Advertisement Image
xxx.xxx.xx	24	Fowl's cackling sound	xx chicken store

FIG. 2 is a flowchart for generally showing processes of the internet advertising method according to a first embodiment of the present invention.

In a primary step, if a user inputs an internet address into the WWW server (S204), an image or text of a relevant web page is transmitted by the WWW server (S205). This allows rapid transmission since a calling is made through the buffering.

In a secondary step, after the buffering, an applet written in the page is activated (S206). Then, the page number and the members ID are sent (S207) so that advertising information according to its corresponding key is requested from the database (S208). An applet that is made by preparing an advertisement table based on the searched data (S210) is activated (S211). A banner advertisement is generated and caused to disappear at the location of a mouse pointer or at a specified location along with sound stimulation. The provision of the sound stimulation is possible once the page is opened. The advertising may be used to notify of on-line and off-line events as well as the products, and may be used for advertisements of lottery and coupons for providing an incentive to performance of a click. Further, the advertising may be used to display relevant articles corresponding to the user's fields of interest and the characteristics of a web page in connection with a home shopping service. This advertising can be provided without an additional application, regardless of a special browser or operating system (on the side of a client).

In a tertiary step, if the user clicks on an advertisement (S212), the page is moved to the relevant advertising site (S213). If a web page of the moved site has the same advertisement as previous pages, sound and the like may be repeatedly issued by a timer or the page can be moved to another advertising site.

FIG. 3 is a flowchart for generally showing processes of the internet advertising method according to a second embodiment of the present invention.

In a primary step, if a user inputs a server address (S304), an image or text of a web page is transmitted (S305).

In a secondary step, an applet is activated (S306) to make a request of a search for the database depending on the subject of the page or on the member information

(S308). Thus, an advertisement table is made on the basis of the information (S410) and the advertisement is then placed with it hidden behind the page (S312). If a new URL is inputted in order to visit another site, the advertisement may be outputted according to the advertisement table, which has been made based on the member information or the characteristics of the previous page.

In a tertiary step, if an event taking much time is requested (S313), the advertisement is outputted (S314). At this time, the event may include all the cases taking much time, such as the cases of moving a web page, moving to another site by inputting a new URL, requesting an information search, and buffering of on-line broadcasting. The advertisement may be outputted after a predetermined time interval set by a timer, or may be outputted immediately upon request of the event. This means that the advertisement can be immediately outputted since it has already loaded. This advertisement may employ as sound information, the contents of lottery and the like. An advertisement copy may also be displayed sequentially one by one on a character basis, instead of a loading bar image at the bottom of the screen that informs the degree of loading. Alternatively, a flash or animation may be inserted into the advertisement. For example, the letters in the advertisement can be displayed with an increment of a letter, such as Ma -> Mati -> Matiz-> Matiz!!.

In a quartic step, if the event is completed (S315), the advertisement is caused to sleep or finished (S316), thereby reducing user's trouble of additionally closing the advertisement. Thereafter, in order to repeat the same advertisement, the advertisement is caused to sleep. On the contrary, if a new advertisement is called, the advertisement is finished.

FIG. 4 is a flowchart for specifically showing the processes of the internet advertising method according to the first embodiment of the present invention.

If a user inputs a server address (S401), the WWW server 117 transmits an image and a text of a web page (S402). If the site is a membership site, an ID and a password of a user are requested (S405) and an applet is then activated (S406). If the user is a registered member, based on the member information prepared like Table 2 (S409), an advertisement table like Table 3 is made in the database. Then, the advertising server 119 transmits an advertisement based on the advertisement table (S412). For example, if the members fields of interest are dance, reading, etc., advertisements tagged with Nos. 1 and 2 are sequentially transmitted, wherein an advertisement related to the dance is tagged with No. 1 and an advertisement related to

the reading is tagged with No. 2. In addition, the advertisement table may be made in consideration of age, occupation or the like. If the user is not a member, a member subscription screen is transmitted to the user so that the user can get a chance of subscribing to the site (S408). Then, a user's record field like Table 2 is prepared based on the member subscription information (S409) and is subsequently stored in the database. Based on the user's record field, an advertisement table like Table 3 is made in the database and is then transmitted to the advertising server 119 (S410), so that an advertisement can be transmitted based on the advertisement table (S412). If the site is a non-membership site, the advertisement server receives an advertisement table like Table 4 depending on the characteristics of the site from the database (S410), and then transmits the advertisement (S412). For example, if the site is a chicken stores site, an image of a chicken is displayed along with a fowls cackling sound.

Also, relevant products corresponding to the user's fields of interest and the characteristic of the page can be displayed in connection with a home shopping service.

If an event of click on the advertisement occurs (S415), movement to a relevant advertising site is performed (S416).

This type of the advertising allows the next advertisement in the advertisement table to be transmitted (S412) after a predetermined time interval (i.e., 120 seconds) is counted by a timer (S417).

FIG. 5 is a flowchart for specifically showing the processes of the internet advertising method according to the second embodiment of the present invention.

If a user inputs a server address (S501), the WWW server transmits an image and a text of a web page (S502). If the site is a membership site, an ID and a password of the user are requested (S505) and an applet is activated (S506). If the user is a registered member, based on the member information prepared like Table 2 (S509), an advertisement table like Table 3 is made in the database (S510). Then, the database transmits the advertisement table to the advertising server (S510). The advertising server transmits an advertisement based on the advertisement table (S512). If the user is not a member, a member subscription screen is transmitted to the user so that the user can get a chance of subscribing to the site (S508). Thereafter, member

information like Table 2 is made based on the member subscription information (S509). Based on the member information, an advertisement table like Table 3 is made in the database and is then transmitted to the advertising server 119 (S510). Subsequently, the advertising server 119 transmits an advertisement based on the advertisement table (S512). If the site is a non-membership site, the database transmits the characteristics of the page to the advertising server 119 (S504). Then, the advertising server 119 transmits an advertisement based on the advertisement table depending on the characteristics of the page of the site like Table 4 (S512). If the site is a search site, information related to an input inputted through an input window as well as the characteristics of the page are stored in the database. The advertisement table is then made based on the stored information and the input, so that an advertisement can be transmitted (S512). For example, if a search key word car is inputted into the input window, an advertisement related to an XX or OO automobile, or the like is transmitted in a queuing scheme. The transmitted advertisement is temporarily caused to sleep on the screen, and when an event requiring long loading time (i.e., over 10 seconds) is generated (S513), the advertisement is drawn out (S515). If the loading of the event is completed (S516), the advertisement is caused to sleep or finished (S519). Also, if a search key word "kitchen utensils" is inputted into the input window, a home shopping advertisement related to the kitchen utensils is transmitted/displayed in a queuing scheme. In this case, the advertisement may be caused to sleep in order to execute the same advertisement table, or the advertisement may be finished in order to newly transmit another advertisement table. Whether the advertisement is caused to sleep or finished can be changed by the WWW server 117. If the event takes much loading time, the next advertisement is transmitted according to the advertisement table (S512) after elapse of a predetermined time interval (i.e., 30 seconds) (S517).

FIG. 6 is a flowchart for specifically showing processes of the internet advertising method according to a third embodiment of the present invention.

Referring to FIG. 6, if a user wants to move to another site by inputting a new URL, an advertisement table is made based on the information in the database in

which a list of user's fields of interest or the characteristics of the site are stored. After a first advertisement is caused beforehand to sleep based on the advertisement table (S602), if a loading for moving to another site by inputting a URL (S603) is generated (S604), the advertisement is drawn out (S605). Since the advertisement has been previously caused to sleep, it can be generated immediately when an event is generated. The advertisement is automatically finished after the loading is completed (S607).

FIG. 7 is a flowchart for showing processes of the internet advertising method according to a fourth embodiment of the present invention. It should be noted that the fourth embodiment applies the advertising method of the present invention to a membership site.

If a user inputs a server address (S701), the WWW server transmits an image or a text of a web page (S702). If the user logs on the web site (S703), the WWW server 117 transmits the member information (resident registration number, age, sex, preference, region and the like) to the advertising server (S704). Then, the advertising server activates a cookie (S705) to search a cookie corresponding to the member information from the database and also to search an advertisement depending on the cookie information (S706 and S707).

The cookie is a data file that is temporarily used to hold a current state in the web browser. The cookie means a data file in which the type of the advertisement, the number of times of view of the advertisement, etc. are stored. The statistics of the type of the advertisement and the number of times of view of the advertisement can be obtained by using the cookie. Limitations on the number of times of view of the exposed advertisement (i.e., daily limitation, total limitation on the advertisement) can be made based on the statistics.

Next, the advertising server transmits the searched advertisement to the user to preload the advertisement on a full screen of a display device of the user for a predetermined period of time (S708). At this time, if the advertisement is successfully preloaded, the web browser of the user is monitored. In other words, it is confirmed as to whether the advertising site has been clicked (S709) and the web

page has been completely loaded (S713). Although not shown in FIG. 7, if the advertisement has not been successfully preloaded, the advertisement is automatically cancelled.

If the user clicks on the advertisement (S709), the user is connected with a relevant advertising site (S710). Information on the click of the displayed advertisement is stored in the cookie (S711). If the advertisement viewed by the user was not clicked, information on the viewed advertisement is stored in the cookie (S711).

The advertisement is finished simultaneously when the web page is completely loaded. If the web page is loaded for a long period of time, another advertisement is searched and displayed (S712).

If the web page is loaded for a long period of time, information on the advertisement that the user viewed for a predetermined period of time is stored in the cookie (S711) and another advertisement that the user has not yet viewed is searched and displayed. These processes (S702 ~ S711) proceed until the web page is completely loaded.

Then, it is confirmed as to whether the user has moved to another site (S713). As a result of the confirmation, if the user has moved to another site, the processes (S701 ~ S712) are repeated.

Meanwhile, advertisements stored in the advertising server may be classified according to their directories depending on a request of an advertiser. These advertisements are randomly displayed based on the age, sex, preference or the like of the user.

FIG. 8 is a flowchart for showing processes of the internet advertising method according to a fifth embodiment of the present invention. It should be noted that the fifth embodiment applies the advertising method of the present invention to the non-membership site.

If a user inputs a server address (S801), the WWW server transmits an image or text of a web page (S802) and then calls the advertising server (S803). The advertising server activates the cookie (S804) in response to the calling of the WWW

server, searches sites that the user visited, checks the characteristics of the site, and searches a cookie corresponding to the characteristics of the site (S805).

Next, the advertising server searches an advertisement depending on the cookie information (S806) and then transmits the searched advertisement to the user to preload the advertisement on the full screen of the display device of the user for a predetermined period of time (S807). At this time, if the advertisement is successfully preloaded, the web browser of the user is monitored. That is, it is confirmed as to whether the advertising site has been clicked (S808) and the web page has been completely loaded (S811). Although not shown in FIG. 8, if the advertisement has not been successfully preloaded, the advertisement is automatically cancelled.

If the user clicks on the advertisement (S808), the user is connected with a relevant advertising site (S809). Also, information on the click of the displayed advertisement is then stored in the cookie (S810). If the advertisement viewed by the user was not clicked, information on the viewed advertisement is stored in the cookie (S810).

The advertisement is finished simultaneously when the web page is completely loaded. If the web page is loaded for a long period of time, another advertisement is searched and displayed (S811).

If the web page is loaded for a long period of time, information on the advertisement that the user viewed for a predetermined period of time is stored in the cookie (S810) and another advertisement that the user has not yet viewed is searched and displayed. These processes (S806 ~ S810) proceed until the web page is completely loaded.

Then, it is confirmed as to whether the user has moved to another site (S812). As a result of the confirmation, if the user has moved to another site, the processes (S801 ~ S811) are repeated.

Meanwhile, advertisements stored in the advertising server may be classified according to their directories, depending on a request of an advertiser. These advertisements are randomly displayed within the results of advertisements searched

depending on a relevant directory.

FIG. 9 is a flowchart for showing processes of the internet advertising method according to a sixth embodiment of the present invention. It should be noted that the sixth embodiment applies the advertising method of the present invention to a search engine.

If a user inputs a search key word to be searched in the search engine (S901), a search engine server performs a search for the key word and simultaneously transmits the key word to the advertising server (S902).

Next, the advertising server 119 activates the cookie (S903), searches a cookie corresponding to the transmitted key word, and searches an advertisement corresponding to the searched results (S904 and S905). Thereafter, the advertising server transmits the advertisement to the user to pre-load the advertisement on the full screen of the display device of the user for a predetermined period of time (S906). For example, if a search key word 'car' is inputted into an input window, an advertisement related to an XX or OO automobile, or the like is transmitted and displayed. Alternatively, if a search key word 'kitchen utensils' is inputted into the input window, a home shopping advertisement related to the kitchen utensils is transmitted and displayed. At this time, if the advertisement is successfully preloaded, the web browser of the user is monitored. In other words, it is confirmed as to whether another search key word has been inputted (S907) and the search has been completed (S910). In addition, although not shown in FIG. 9, if the advertisement is not successfully preloaded, the advertisement is automatically cancelled.

If the user clicks on the advertisement (S907), the user is connected with a relevant advertising site (S908). Then, information on the click of the displayed advertisement was clicked on is then stored in the cookie (S909). If the advertisement viewed by the user is not clicked, information on the viewed advertisement is stored in the cookie (S909).

The advertisement is finished simultaneously when the search is completed. If the search is performed for a long period of time, another advertisement is searched and displayed (S910).

If the search is performed for a long period of time, information on the advertisements that the user viewed for a predetermined period of time is stored in the cookie (S909) and another advertisement that the user has not yet viewed is searched and displayed. These processes (S905 ~ S909) proceed until the search is successfully completed.

Then, it is confirmed as to whether the user has inputted another search key word (S911). As a result of the confirmation, if the user has moved to another site, the processes (S901 ~ S910) are repeated.

Meanwhile, advertisements stored in the advertising server 119 may be classified according to their directories, depending on a request of the advertiser. These advertisements are randomly displayed within the results of the advertisements residing in related directories by searching the directories using the key word.

FIG. 10 is a flowchart for explaining a process of displaying an advertisement in the internet advertising method according to the fourth to sixth embodiments of the present invention.

First, advertisement information is searched according to information stored in the cookie (S1000). It is determined whether the number of times of view of the exposed advertisement exceeds a predetermined value (S1010). For example, the number of times of view of the exposed advertisement may be limited to five times per month, once per day, or the like. If the number of times of view of the exposed advertisement exceeds the predetermined value, information about this is stored (S1070).

Next, it is determined whether the advertisement searched in step S1000 is one that the user has viewed (S1020). If so, another advertisement is searched (S1030). If not, on the other hand, the advertisement searched in step S1000 is transmitted and placed to the user (S1040).

Thereafter, it is determined whether the web page has been loaded (S1050). If the web page has not been loaded even after the advertisement is displayed for a predetermined period of time, another advertisement is searched and placed (S1030). The above processes (S1010 and S1040) are repeated until the web page is completely

loaded.

If the web page is completely loaded, the advertisement is finished (S1060) and information on the type of the exposed advertisement and the number of times of view of the exposed advertisement is automatically stored in the cookie (S1070).

Further, in the present invention, in order to prevent repetitive display of the advertisement, the number of times of view of the exposed advertisement may be limited according to an IP, the user's resident registration number, etc. in addition to the cookie.

In the preferred embodiments of the present invention, the advertising server checks, at a predetermined interval, whether a web page is completely loaded, whether the user is moved to another site, and whether the web browser is finished, by using a page, i.e. "trigger.html," for monitoring the web browser of the user.

In order for the advertisement information not to be exposed within a site, the "trigger.html" uses a control scheme in which by using a domain reference function and a domain list comparing function whenever a sub domain, etc. of the site are changed, an advertisement is automatically exposed when the current site is moved to a site which does not exist in a domain list, i.e. another site.

Further, an advertisement is displayed immediately when a domain for a single URL is changed. In a case where a sub domain, such as 'imbc.com' used in 'www.imbc.com', 'music.imbc.com', and 'wedding.imbc.com', is repeated, only the repetitive sub domain is checked so that they can be recognized substantially as a single site. On the other hand, if two separate sites are used, an advertisement may be displayed, or may not be displayed depending on whether the trigger.html page can be called or not, by inserting the trigger.html page into a root of the domain. In such way, since the sites can be grouped into a single unit, only a single advertisement can be displayed to a single user.

Additionally, according to the present invention, statistics of advertisement information transmitted to the user can be collected according to an advertiser/advertising site on a weekly or monthly basis.

Industrial Applicability

According to the present invention, there is an advantage in that an advertising effect can be maximized by performing a target advertising with respect to a specific user.

In addition, according to the present invention, voice and sound stimulation effects can be added to an advertisement. Therefore, not only the degree of user's interest in the advertisement can be increased but also the advertisement can be revealed simultaneously to several persons due to propagation of the sound stimulation. Since an identical advertising copy for a product can be repeatedly presented, a repetitive advertising effect can be obtained.

Further, the present invention is very effective since an advertisement can be displayed without lengthening page loading time by using a buffering and a method of beforehand causing the advertisement to sleep.

Furthermore, the present invention can increase the degree of concentration on the advertisement by placing the advertisement on a site basis.

Additionally, according to the present invention, an advertisement can be presented on a subject/ member basis. Thus, overlapping of advertisements can be prevented, if necessary, and the advertisements which are to user's taste can be displayed. Thus, the advertising effect can be maximized.

CLAIMS

1. An internet advertising system including a terminal device and a server device, the terminal device having an input unit for receiving information from a user, an output unit, an interface unit, an internet protocol unit, a browser, an operating system for controlling the components and a connection unit connected to an internet network, and the server device having a connection unit connected to the internet network, an interface unit, an internet protocol unit, a WWW server, a CGI program unit, a database and an operating system for controlling the components, the internet advertising system comprising:

a database for storing information on a list of user's fields of interest or characteristics of a web page;

a database for storing an advertisement table made based on the information; and

a device for displaying an advertisement to the user based on the advertisement table.

2. An internet advertising method, comprising the steps of:

storing information on a list of user's fields of interest or characteristics of a web page in a database;

making an advertisement table based on the information and then storing the advertisement table in the database; and

displaying an advertisement to the user based on the advertisement table.

3. The internet advertising method as claimed in claim 2, wherein the step of displaying the advertisement to the user further comprises the steps of:

causing the advertisement to sleep on a screen;

displaying the advertisement on the screen if an event which requires loading time exceeding a predetermined period of time is generated or immediately when the event is generated; and

extinguishing or causing the advertisement to sleep at the same time when the event is completely loaded.

4. The internet advertising method as claimed in claim 2 or 3, wherein the advertisement includes voice or various sound stimulation effects.

5. The internet advertising method as claimed in claim 2, wherein the step of storing information on the list of the user's fields of interest or the characteristics of the page in the database comprises the steps of:

if a site is a membership site, storing the list of the user's fields of interest based on member information in the database; and

if the site is a non-membership site, storing the characteristics of the page in the database.

6. The internet advertising method as claimed in claim 2, wherein the step of storing information on the list of the user's fields of interest or the characteristics of the page in the database further comprises the step of storing information on an input inputted through a predetermined input window in the database.

7. The internet advertising method as claimed in claim 3, wherein the step of extinguishing or causing the advertisement to sleep at the same time when the event is completely loaded comprises the steps of causing the advertisement to sleep in order to execute the same advertisement table; and finishing the advertisement in order to transmit new different advertisement table.

8. An internet advertising method, comprising the steps of:

inputting a web site address by a user;

transmitting, by a web server, information on the user to an advertising server;

searching, by the advertising server, a cookie depending on the user information;

searching and displaying, by the advertising server, a relevant advertisement depending on the searched cookie information; and

stopping the advertisement if a web page is completely loaded, and returning to a web browser window.

9. The internet advertising method as claimed in claim 8, wherein the step of searching, by the advertising server, the cookie depending on the user information comprises the steps of:

if the site is a non-membership site, checking characteristics of the site visited by the user and storing them in the cookie;

searching an advertisement using the information stored in the cookie; and

transmitting a relevant advertisement.

10. The internet advertising method as claimed in claim 8, wherein the step of searching, by the advertising server, the cookie depending on the user information comprises the steps of:

if a search engine is used, checking a search key word which the user intends to search and storing it in the cookie; and

searching an advertisement corresponding to the key word and transmitting a relevant advertisement to the user.

11. The internet advertising method as claimed in claim 8, wherein the step of searching and displaying, by the advertising server, the relevant advertisement depending on the searched cookie information comprises the step of:

if the web page has not been yet loaded even after the advertisement is finished, searching and displaying another advertisement which has not been viewed by the user until the web page is completely loaded.

12. The internet advertising method as claimed in claim 8, wherein the cookie searches an advertisement suitable for the user's taste by using the user information,

and searches and stores the type and the number of times of view of the advertisement that has been previously viewed by the user in order to prevent repetitive display of the advertisement.

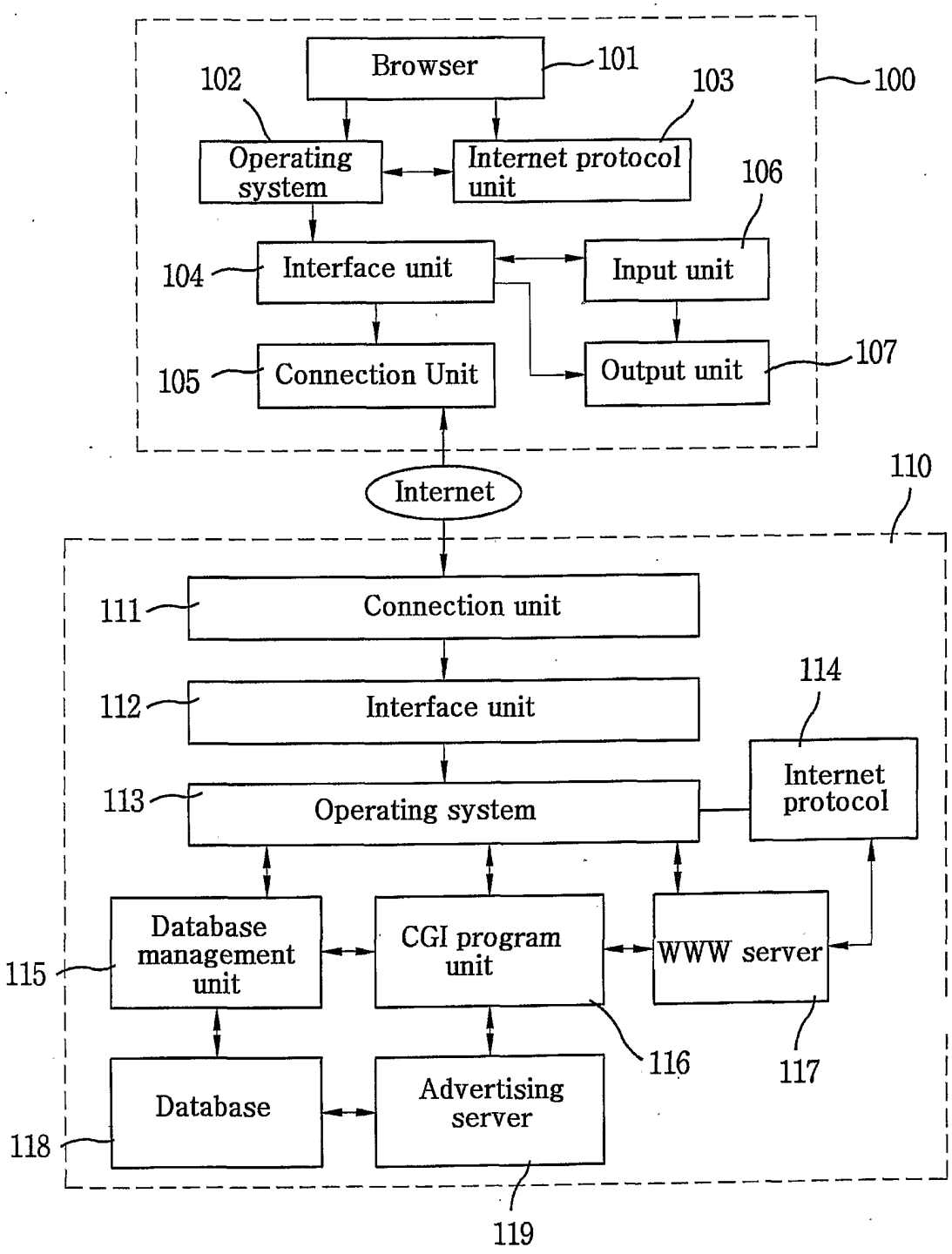

Browser
101
102
103
100
Operating system
Internet protocol unit
106
104
Interface unit
Input unit
105
Connection Unit
Output unit
107
Internet
110
111
Connection unit
112
Interface unit
114
113
Operating system
Internet protocol
Database management unit
CGI program unit
WWW server
115
116
117
Database
Advertising server
118
119

Fig. 1

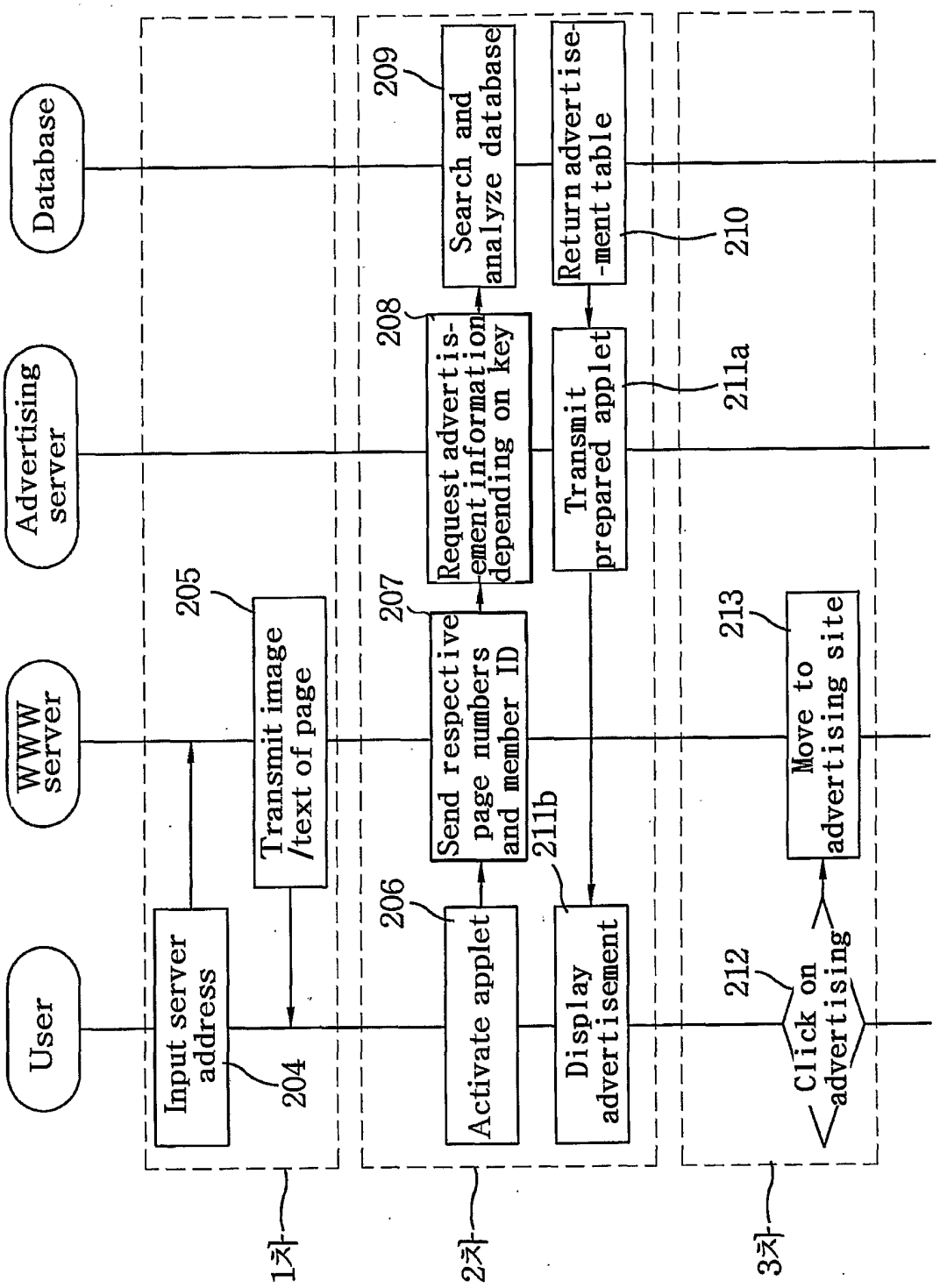

User
WWW server
Advertising server
Database
Input server address
204
Transmit image /text of page
205
Activate applet
206
Send respective page numbers and member ID
207
Request advertisement information depending on key
208
Search and analyze database
209
Return advertisement table
210
Transmit prepared applet
211a
Display advertisement
211b
Click on advertising
212
Move to advertising site
213
1차
2차
3차

Fig. 2

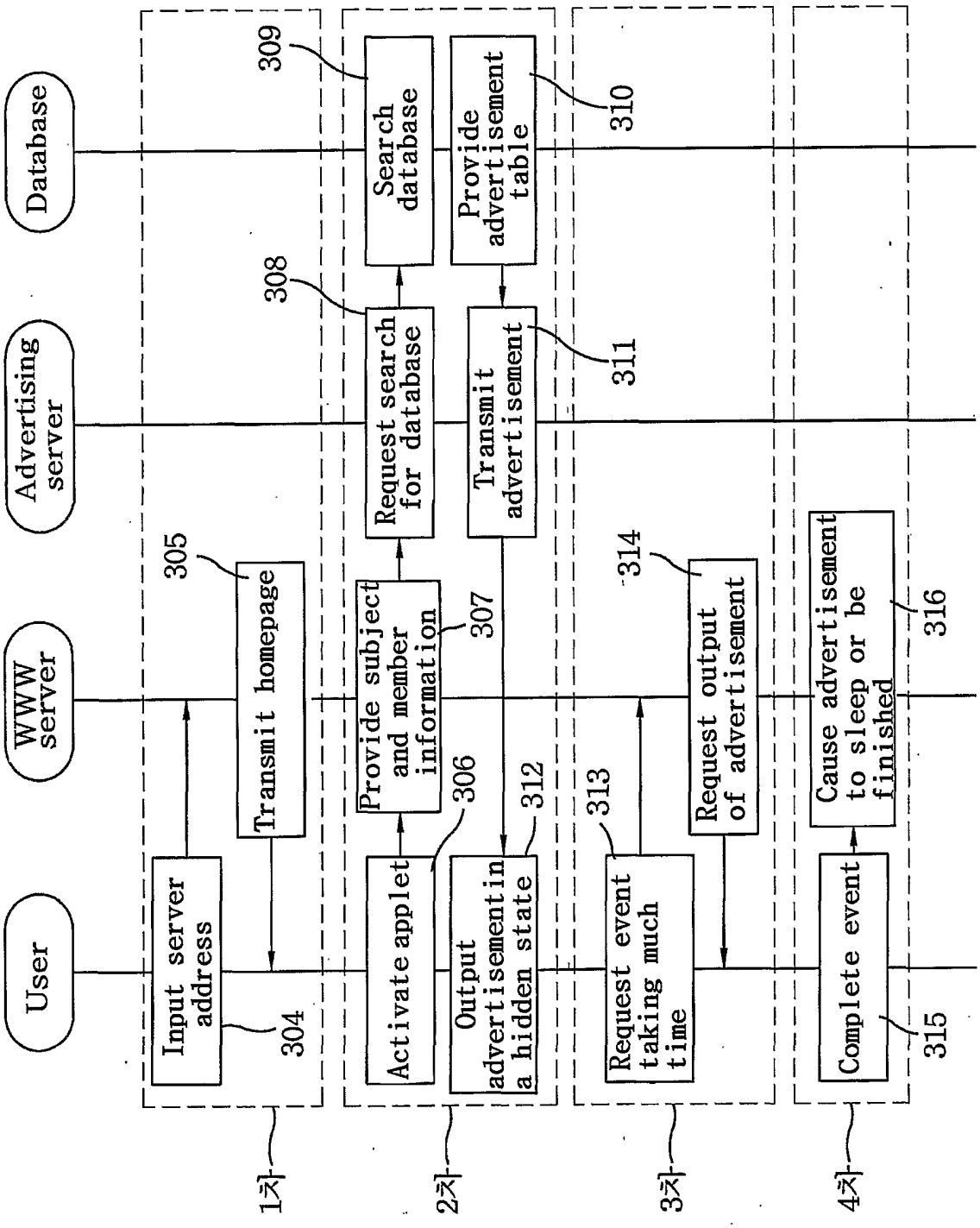

User
WWW server
Advertising server
Database
Input server address
304
Transmit homepage
305
Activate applet
306
Provide subject and member information
307
Request search for database
308
Search database
309
Provide advertisement table
310
Transmit advertisement
311
Output advertisementin a hidden state
312
Request event taking much time
313
Request output of advertisement
314
Complete event
315
Cause advertisement to sleep or be finished
316
1차
2차
3차
4차

Fig. 3

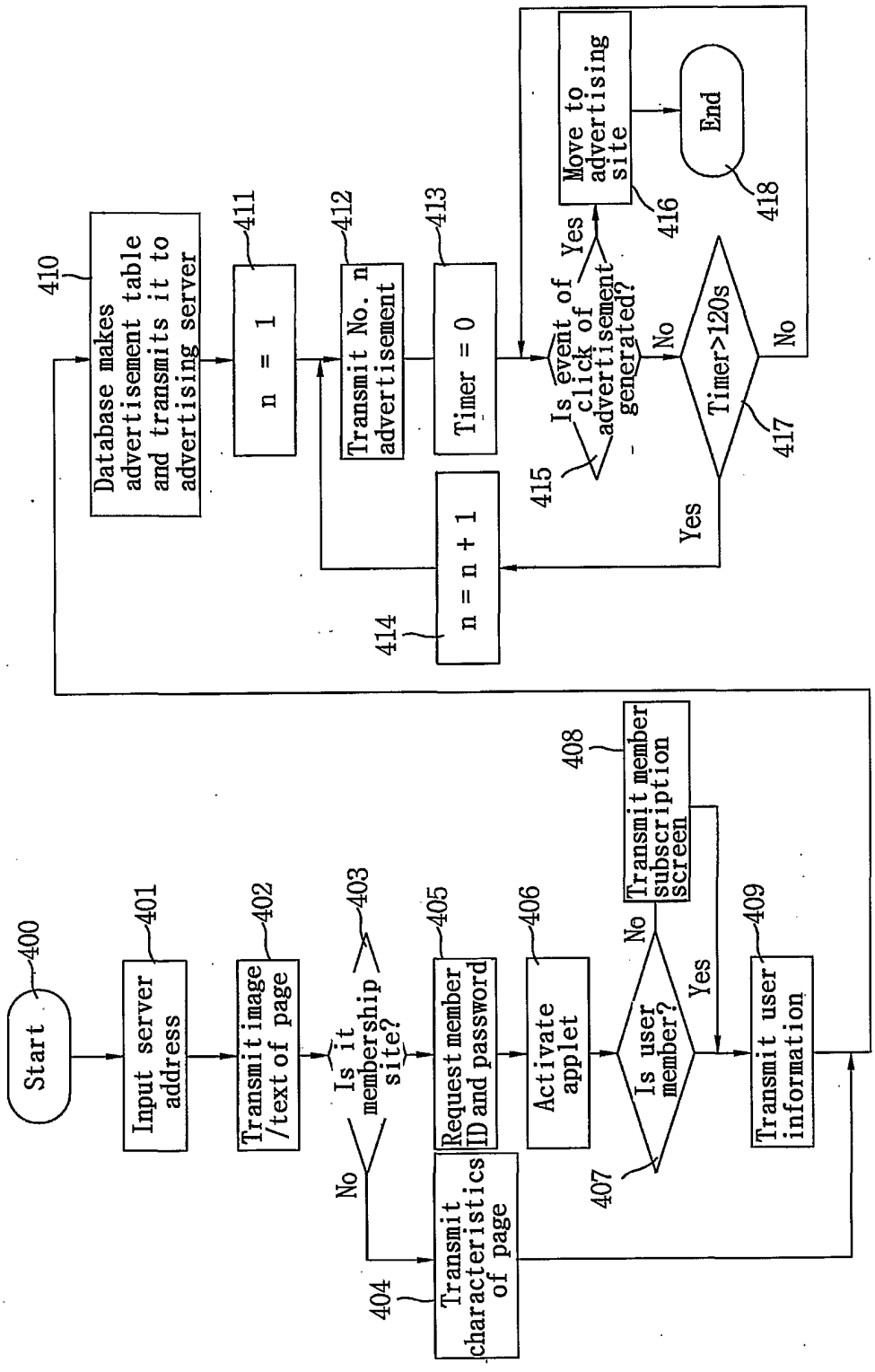

Start
400
Input server address
401
Transmit image /text of page
402
Is it membership site?
403
No
Transmit characteristics of page
404
Request member ID and password
405
Activate applet
406
Is user member?
407
No
Transmit member subscription screen
408
Yes
Transmit user information
409
Database makes advertisement table and transmits it to advertising server
410
n = 1
411
Transmit No. n advertisement
412
Timer = 0
413
n = n + 1
414
Is event of click of advertisement generated?
415
Yes
Move to advertising site
416
No
Timer>120s
417
Yes
No
End
418

Fig. 4

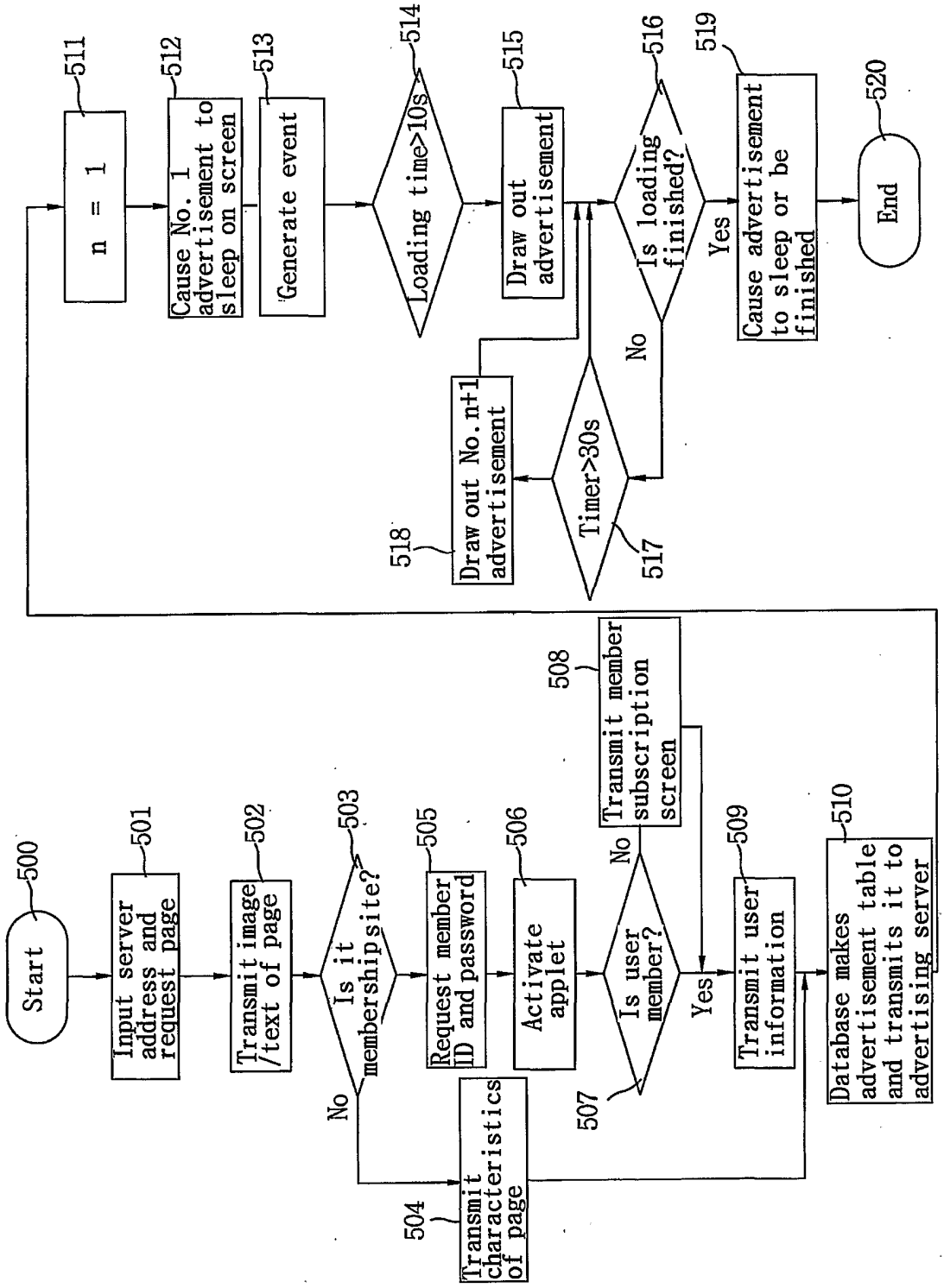

Start
500
Input server address and request page
501
Transmit image /text of page
502
Is it membershipsite?
503
No
Transmit characteristics of page
504
Request member ID and password
505
Activate applet
506
Is user member?
507
No
Transmit member subscription screen
508
Yes
Transmit user information
509
Database makes advertisement table and transmits it to advertising server
510
n = 1
511
Cause No. 1 advertisement to sleep on screen
512
Generate event
513
Loading time>10s
514
Draw out advertisement
515
Is loading finished?
516
Yes
Cause advertisement to sleep or be finished
519
End
520
No
Timer>30s
517
Draw out No. n+1 advertisement
518

Fig. 5

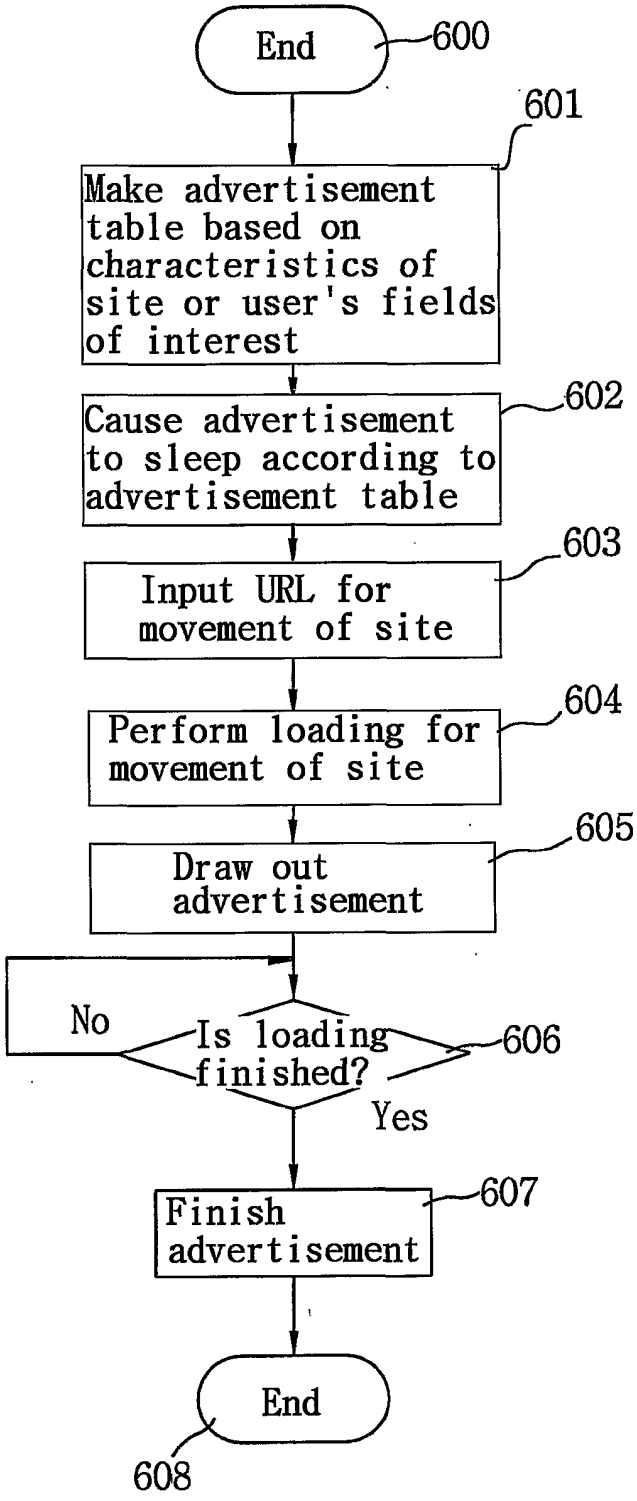

End
600
601
Make advertisement table based on characteristics of site or user's fields of interest
602
Cause advertisement to sleep according to advertisement table
603
Input URL for movement of site
604
Perform loading for movement of site
605
Draw out advertisement
No
Is loading finished?
606
Yes
607
Finish advertisement
End
608

Fig. 6

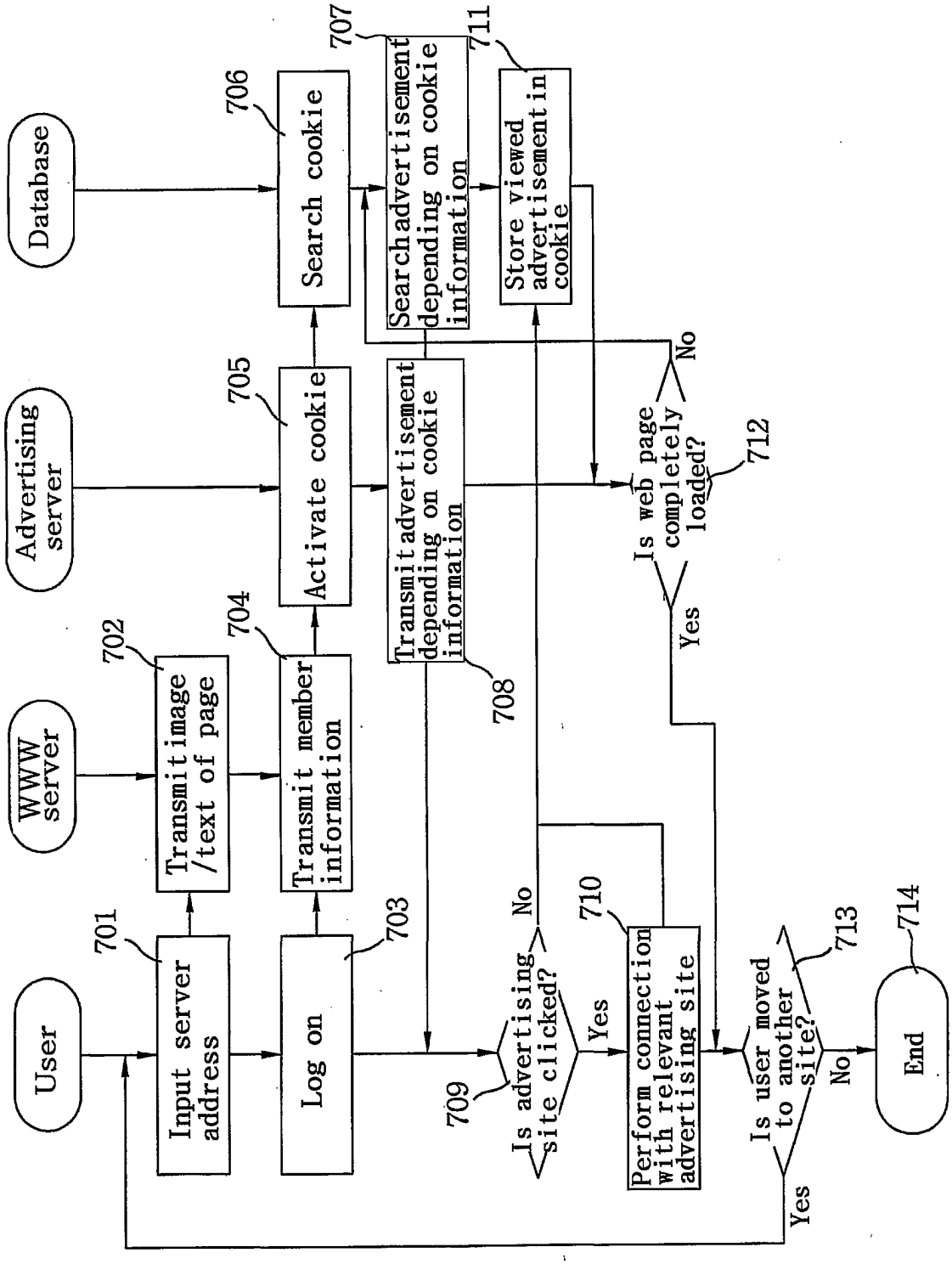

User
Input server address
701
WWW server
Transmit image /text of page
702
Log on
703
Transmit member information
704
Advertising server
Activate cookie
705
Database
Search cookie
706
Transmit advertisement depending on cookie information
707
Is advertising site clicked?
709
No
Yes
Transmit advertisement depending on cookie information
708
Search advertisement depending on cookie information
711
Store viewed advertisement in cookie
Is web page completely loaded?
712
No
Yes
Perform connection with relevant advertising site
710
Is user moved to another site?
713
No
Yes
End
714

Fig. 7

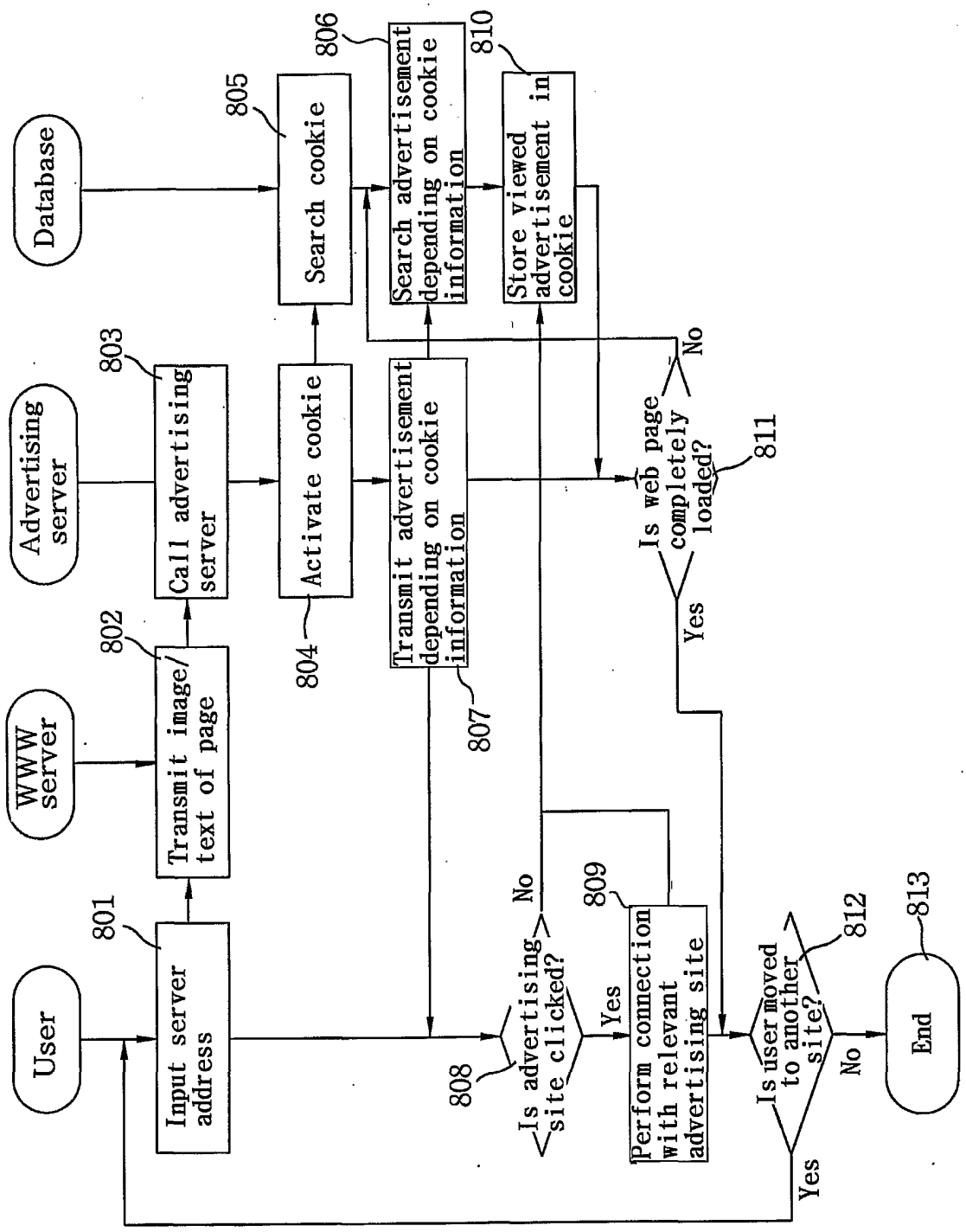

User
Input server address
801
WWW server
Transmit image/ text of page
802
Advertising server
Call advertising server
803
Database
Search cookie
805
Activate cookie
804
Search advertisement depending on cookie information
806
Store viewed advertisement in cookie
810
Transmit advertisement depending on cookie information
807
Is web page completely loaded?
811
No
Yes
Is advertising site clicked?
808
No
Yes
Perform connection with relevant advertising site
809
Is user moved to another site?
812
No
Yes
End
813

Fig. 8

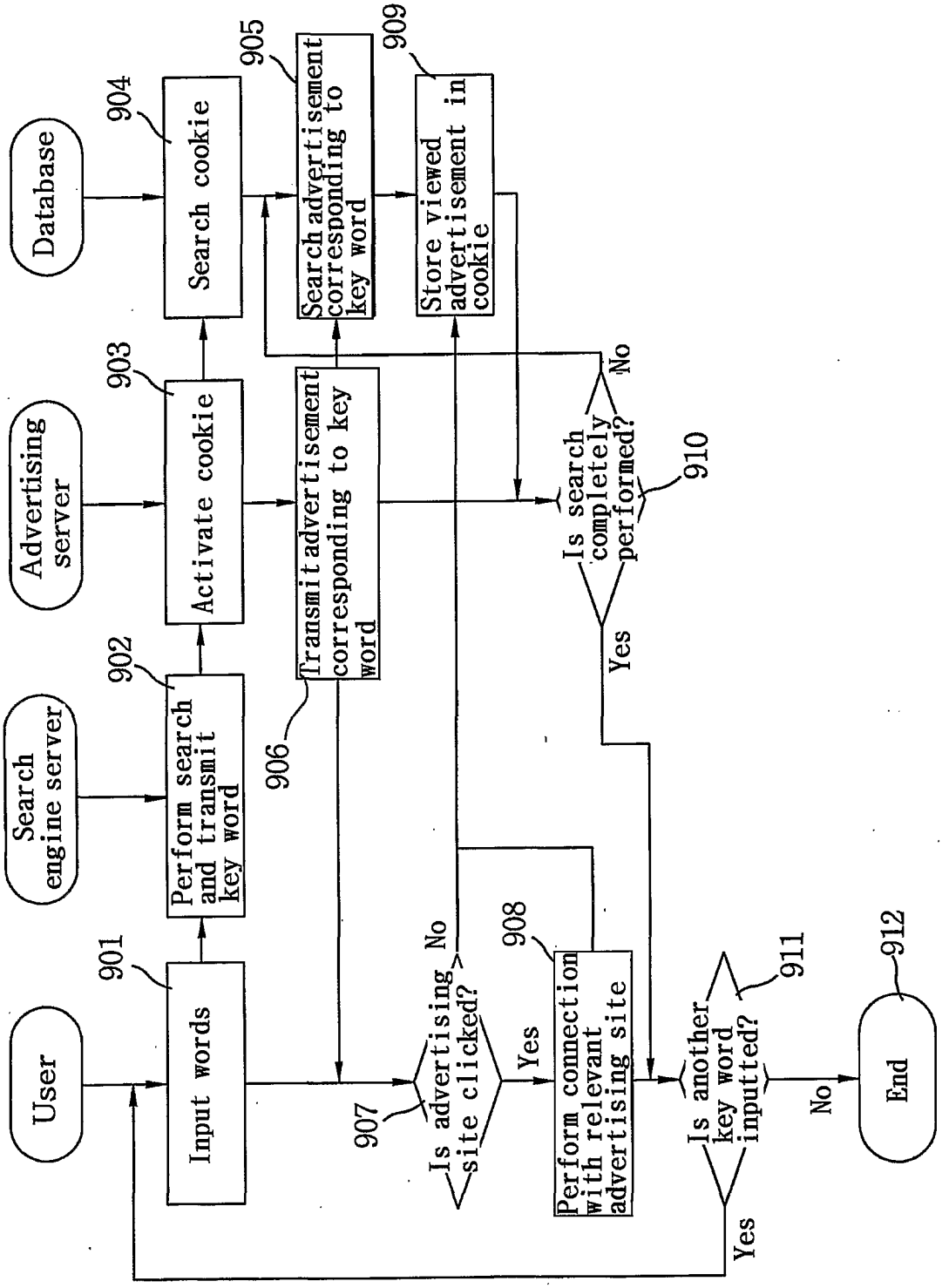

User
Input words
901
Search engine server
Perform search and transmit key word
902
Advertising server
Activate cookie
903
Database
Search cookie
904
Search advertisement corresponding to key word
905
Transmit advertisement corresponding to key word
906
Is advertising site clicked?
907
No
Yes
Perform connection with relevant advertising site
908
Store viewed advertisement in cookie
909
Is search completely performed?
910
No
Yes
Is another key word inputted?
911
Yes
No
End
912

Fig. 9

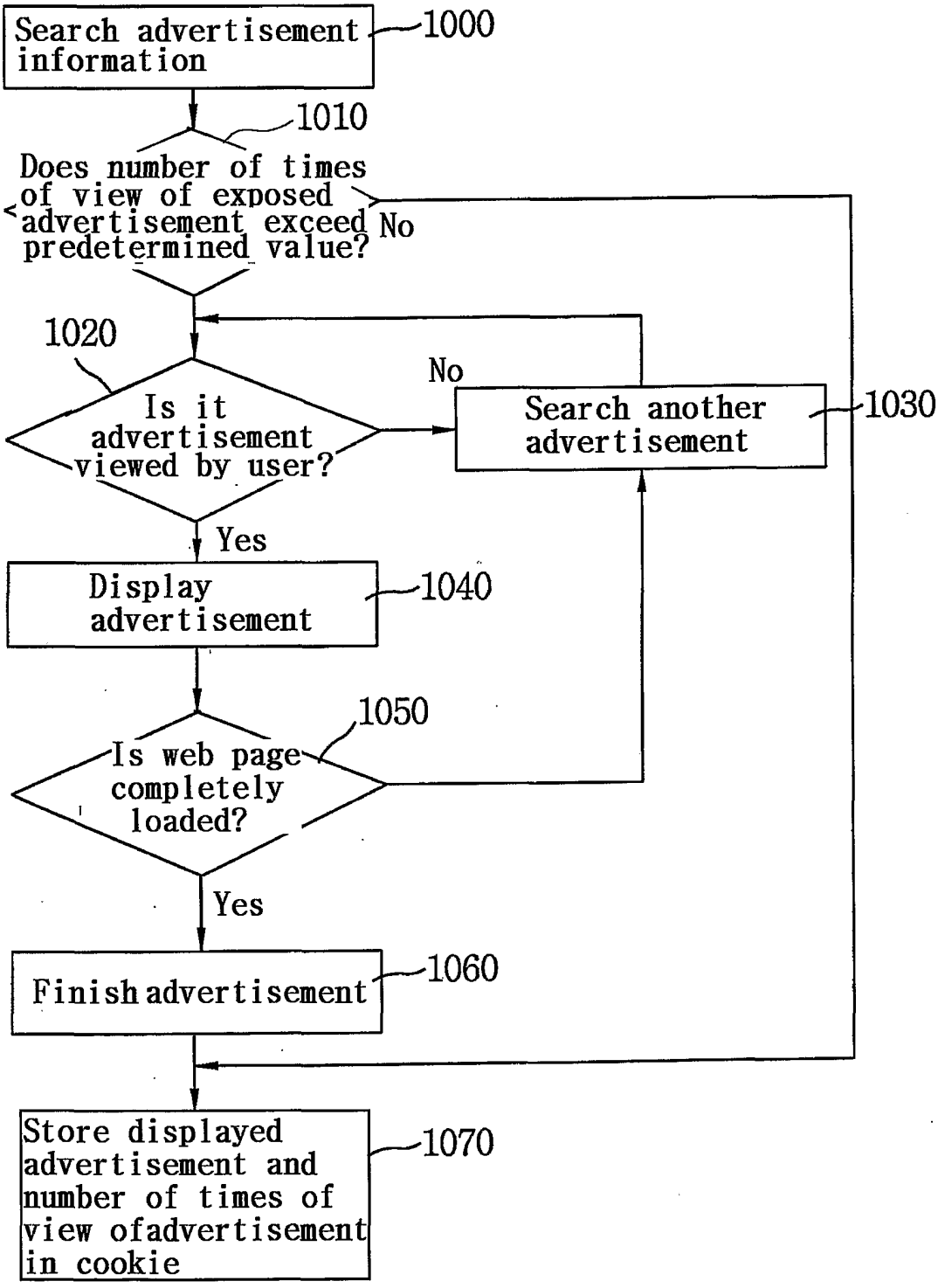

Search advertisement information
1000
1010
Does number of times of view of exposed advertisement exceed predetermined value?
No
1020
Is it advertisement viewed by user?
No
Search another advertisement
1030
Yes
Display advertisement
1040
1050
Is web page completely loaded?
Yes
Finish advertisement
1060
Store displayed advertisement and number of times of view ofadvertisement in cookie
1070

Fig. 10

INTERNATIONAL SEARCH REPORT

International application No.
PCT/KR01/01212

A. CLASSIFICATION OF SUBJECT MATTER

IPC7 G06F 17/60

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

B. FIELDS SEARCHED

Minimun documentation searched (classification system followed by classification symbols)

IPC7 G06F 17/60

Documentation searched other than minimun documentation to the extent that such documents are included in the fileds searched

Korean patents and applications for inventions since 1975

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5740549 A (POINTCAST INC.) 14 APR. 1998 SEE THE WHOLE DOCUMENTS	1,2,4,5,6
Y	WO 9960504 A (UNICAST COMMUNICATIONS CORP.) 25 NOV. 1999 SEE THE WHOLE DOCUMENTS	3,7,11
A	US 5794210 A (CYBERGOLD INC.) 11 AUG. 1998 SEE THE PRIVACY PART	1-12
Y	US 6009410 A (AT & T CORP.) 28 DEC. 1999 SEE THE WHOLE DOCUMENTS	8,9,10,12
X	WO 9721183 A (TELCODIA TECHNOLOGIES INC.) 12 JUN. 1997 SEE THE WHOLE DOCUMENTS	1-12

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

☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevence

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevence; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevence; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents,such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
30 OCTOBER 2001 (30.10.2001)	31 OCTOBER 2001 (31.10.2001)

Name and mailing address of the ISA/KR	Authorized officer
Korean Intellectual Property Office Government Complex-Daejeon, Dunsan-dong, Seo-gu, Daejeon Metropolitan City 302-701, Republic of Korea	JEONG, Jae Hoon
Facsimile No. 82-42-472-7140	Telephone No. 82-42-481-5787

Form PCT/ISA/210 (second sheet) (July 1998)