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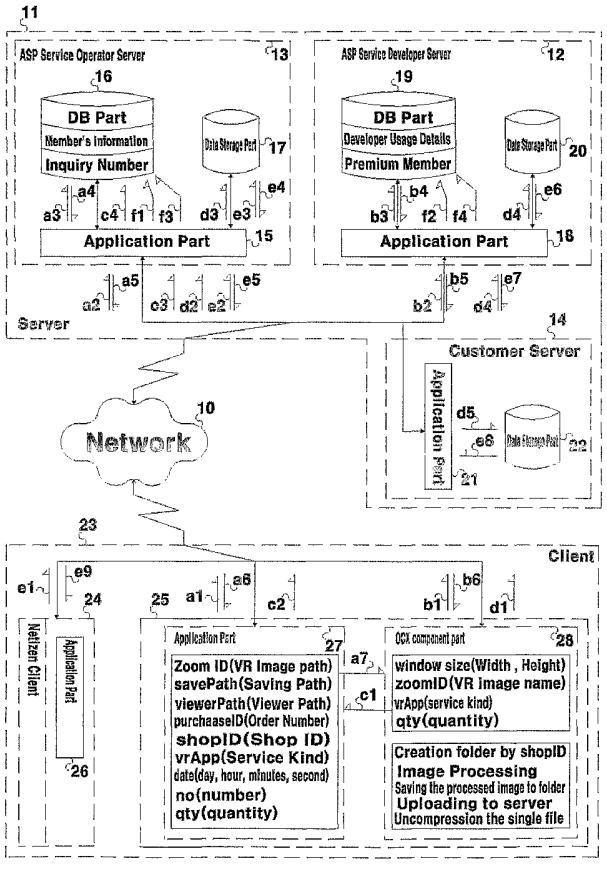
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(54) Title: THE METHOD AND EQUIPMENT OF ASP SERVICE FOR MULTI-RESOLUTION IMAGE ON THE ENVIRONMENT OF MULTI-SERVER.



(57) Abstract: This invention is in relation with the methods and equipments of Application Service Provider (hereinafter called "ASP") for multi-resolution image on multi-web server to provide the total process to manufacture multi-resolution image, up-loading to server as well as to put up into web in one service. This invention can be embodied to link ASP Service Developer server(12) that developed multi-resolution image processing program solution, ASP Service Operator Server of multi server for middle/large scaled portal site that has many members or is operating SOHO/Professional Shopping Mall(13), Multi-Web Server including ASP Clients Server operated by Image Manufacturing Client(25) that has a shop in any middle/large sized portal site that using this invention (for example: SOHO mall of Yahoo Korea) and manufacture multi-resolution image and ordinary Netizen Client(24) surfing manufactured image by above Image Manufacturing Client based on Network(10) environment including Internet. According to this invention, it is available the client that need the image to handle all the process to manufacture multi-resolution image, up loading to server and to put up into web as a service. Therefore, all the process from image manufacturing to start business through web can be realized easily and with low cost.

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The method and equipment of ASP service for multi-resolution image on the environment of multi-server

【Technical Field】

This invention is in relation with the methods and equipments of Application Service Provider (hereinafter called "ASP") for multi-resolution image on Multi-Web Server to provide the total process to manufacture multi-resolution image, up-loading to server as well as to put up on the net work including the Internet in one service.

【Background Art】

So far, expensive multi-resolution image manufacturing solution has to be purchased in order to provide multi-resolution image on the network including the Internet. However, in case of the image processing solution realized in net work, it is recommendable to use in the form of ActiveX OCX Component, protection measure is not so suitable due to the features of the ActiveX OCX Component.

For example, even if shopping mall operator manufactured multi-resolution image, program of shopping mall has to be revised in order to show it to Netizen, and it would be almost impossible to revise the program by ordinary people as it is highly sophisticated technical job.

Furthermore, in case of the overseas companies developing multi-resolution image manufacturing solution, they like to supply the developed solutions to a lot of ordinary users to ensure their earnings than limited number of web site construction companies. However, practically ordinary users have limited know-how and related equipment to manufacture multi-resolution image, up load to server and put up into web to show it to ordinary users. For this reason, they inevitably supply to web site construction companies and they face limited market development.

Furthermore, there are still remain the question that how much sales

increase can be expected even if the multi-resolution image provided to Netizens to display commodities in shopping mall. That is, no one can sure that the multi-resolution image with much expense and efforts is really necessary.

To solve this problem, there is an attempt to apply multi-resolution image to investigate customer preference trends. This is the method to investigate preference trends by clear image piece units down loaded from server when each reduced multi-resolution image obtained from the original image and divided into same size have been enlarged by Netizen onto specific part.

Especially, in order to investigate preference, it is necessary to analyze the collected result through e-mail sent to a lot of Netizen with much amount of expense and efforts after manufacturing multi-resolution image. In this case, the investigation of preference per each image unit in piece may be possible problem.

For example, Toyota Motors is investigating the preference in Korea and China with much amount of expense, and suffering with the problem that accurate investigation of preference is impossible as the investigation has to be progressed through photographed car image divided in tile type pieces in this test method.

This problem is derived from the fact that accurate investigation of preference for audio or for fuel instrument panel is impossible as there may be exist complex images such as instrument panel and audio etc. in the grid type image in pieces if we suppose the photographed image is of front side car interior.

Furthermore, usually most of the Netizen feel inconvenience to respond this kind of investigation for preference as they are facing on lots of requests to respond so may research and investigation through Spam e-mails.

However, in the Netizens point of view, they use to have desire to observe any interesting commodities carefully and in the sellers point of view, they have to read the desire of Netizens through maximize the efficiency with less expense.

Especially, in the Netizen's psychological point of view, there are a certain trends that most of the Netizens to respond on the request to apply premium that can be closed to any commodity interested but not decided yet to purchase. Through these kinds of application process they can remember relevant commodities for a long time.

As we can realize in this case, Netizen's trends and characteristic analysis are very important element for the commodity sellers, however, expensive solutions have to be purchased so far to do this job.

Also, it is recommendable the image to put up into middle/large scale portal site, however, system developer use to avoid to entrust other server for the operation as the protection measure for illegal usage of processing solution of ActiveX OCX type image is not ensured, and accurate settlement of account is not clear in calculation how many multi-resolution images have been manufactured and provided yet.

[Disclosure of Invention]

The purpose of this invention is to provide the method and equipment for ASP service that any ordinary user without professional knowledge enable to manufacture multi-resolution image and put it into business by providing the total process to manufacture multi-resolution image, up-loading to server as well as to put up on the web in one service on Multi-Web Server composed by ASP Service Developer, ASP Service Operator and ASP Service Client Server in order to solve the problem described previously.

In addition, this invention provide the way to block illegal usage of image manufacture solution for image manufacture clients and to clear settlement of account between ASP Service Developer and ASP Service Operator.

Furthermore, this invention can provide as well improved preference survey method in accuracy to maximize advertisement on specific field of the commodity as it provide ASP service in middle/large scale portal site that has so

many members or using by lots of Netizens through its feature that can proceed survey for commodity or inquiry easily .

In order to achieve the technical task described above, this invention provides the equipment to execute ASP service that provide multi-resolution image by linking ASP Service Developer, ASP Service Operator server that operate middle/large scale portal site, Image Manufacturing Client that posses application and OCX Component Part that Multi-Web Server including ASP Service Client Server which is operated by Image Manufacturing Client download image manufacturing program, ordinary Netizen Clients who are browsing images manufactured by Image Manufacturing Client and Internet communication network as well, as the base.

Also the ASP service method that provide multi-resolution image using multi web server mentioned above can include following steps.

Firstly, it includes the step that image manufacturing client connect to web server. Image Manufacturing Client down load image manufacturing program that composed application and OCX Component Part from Multi-Web Server Image Manufacturing Client log-in and treat service order and settle the account in order to authenticate the membership between application part of Image Manufacturing Client and Multi-Web Server.

Application part transfer necessary parameter to OCX Component Part in order to authenticate legal usage, recording of usage details and up-load.

Authentication for the legal usage in between Multi-Web Server and OCX component is executed to identify if order and account settlement has been processed before manufacturing, OCX component transfer usage details of image manufacturing client to ASP Service Developer Server and record the usage details in relevant data base of ASP Service Developer Server.

Image Manufacturing Client input image by using OCX component mentioned above and set parameter related image output form.

And this time, reducing step and calculation step of divided size for multi-resolution image is executed. Input images will be saved as divided

multi-resolution image, the saved folder and file name will be based on the parameter transferred from application part. However, folder will be named as SavePath and web page will be named as PurchasID so that always new multi-resolution image can be created even though Multiple Image Manufacturing Clients manufacture multi-resolution image at the same time or identical Image Manufacturing Client manufacture multi-resolution image.

Image replacement and saving steps are included in this case to prevent illegal usage and manufacture web page that can be put up on the web.

This time, PurchasID will be used that was transferred as parameter from application part so that always new multi-resolution image can be created even though Multiple Image Manufacturing Clients manufacture multi-resolution image at the same time or identical Image Manufacturing Client manufacture multi-resolution image.

Above mentioned PurchasID will be created by mixture ShopID and present time so that it can be the unique order number, but also can be composed by addition or reduction of necessary item. The web page produced as described above upload into indicated server by Image Manufacturing Client.

As the last step, the uploaded web page will be put up on the web to provide to ordinary Netizen Clients by using the server designated by client.

And the put up step on the web can include viewer program download step, initial image download and display step as well as image reading support step.

As this invention can be unified or transferred the function between servers in above mentioned web servers, it is focused rather what kind of can be finally provided to Image Manufacturing Client by Multi-Web Server than which server play what kind of role .

Therefore, according to this invention, easy, low cost and rapid process of image is possible without construction of any other system as Image Manufacturing Client can be provided one service from image manufacturing to put up it on web and connect to a business.

<Description of the Figures>

Fig. 1 is the example to show the composition of ASP service system to provide multi-resolution image for multi web server in this invention.

Fig. 2 is the example to show the work for service general information table of member's information DB.

Fig. 3 is the example to show the work for service order control table of member's information DB.

Fig. 4 is the example to show the work for inquiry receipt table of inquiry number DB.

Fig. 5 is the example to show the work for inquiry statistics table of inquiry number DB.

Fig. 6 is the example to show the work for member's information table of member's information DB.

Fig. 7 is the example to show the work for inquiry statistics table of inquiry number DB.

Fig. 8 is the example to show the work for developer using details table of developer member's information DB.

Fig. 9 is the example to show the work for data composition for the image in general viewing.

Fig. 10 is the example to show the work for mutual replacement of the data in general viewing of Fig. 9.

Fig. 11 is the example to show the work for multi-resolution image that formed in tile composition occurred in photographing by digital camera or in reducing image from scanning by scanner by 50%

From Fig. 12 to 30 is to explain the flow of the work of this invention.

Fig. 31 is the example to show the work designated specific field of multi-resolution image as link field

Fig. 32 is the example of the work to pop-up the link page when click the link field.

Fig. 33 is the example of the work for premium application form to

pop-up when a certain time has passed in case the link field is for investigation of inquiry frequency.

< Description of the Symbols in the Figures >

10 : Network	11 : Multi-Web Server
12 : ASP Service Developer Server	13 : ASP Service Operator Server
14 : ASP Service Client Server	15, 18, 21, 26, 27 : Application area
16, 19 : DB area	17, 20, 22 : Data storage area
23 : Client	.24 : Netizen client
25 : Image Manufacturing Client	28 : OCX Component area

【Best Mode for Carrying Out the Invention】

From now on, proposed practical example of this invention will be explained with some Fig.s.

As you can see in Fig. 1, This invention can be composed to link ASP Service Developer Server(12) that developed multi-resolution image processing program solution, ASP Service Operator Server(13) of multi server for middle/large scaled portal site that has many members or is operating SOHO/professional shopping mall, multi-web server including ASP Clients Server that is operated by Image Manufacturing Client(25) that has a shop in any middle/large scaled portal site that using this invention (for example: SOHO mall of Yahoo Korea) and manufacture multi-resolution image and ordinary Netizen Client(24) surfing manufactured image by above Image Manufacturing Client based on Network(10) environment through Internet.

Above mentioned ASP Developer Server(12) can include Application Part(18) that include image manufacturing application and the application to display manufactured image, Data Storage Part(20) that can save manufactured multi-resolution image, text and voice data, Data Base Part(19) that include DB for premium members to register all data by activating premium application display when a certain time has passed from the time Netizen Client(24) start to read a certain area of multi-resolution image manufactured and developer usage

details DB to register detailed data for usage by developer when multi-resolution image manufactured by execution of multi-resolution image manufacturing application installed on ASP Service Operator Server. Fig. 8 shows the example of Developer DB composition above.

Above ASP Service Operator Server(13) can include Application Part(15) that include multi-resolution image manufacturing application and application to display multi-resolution image manufactured, Data Storage Part(17) that can save manufactured multi-resolution image, text and voice data, Data Base Part(16) that include member's information DB to control data when Image Manufacturing Client(25) log-in to execute multi-resolution image manufacturing application, inquiry numbers DB to save and control inquiry numbers when any Netizen Client(24) start to search a certain area already assigned by Image Manufacturing Client(25) through multi-resolution image viewer application manufactured.

The ASP service Client Server(14) that is hold by Image Manufacturing Client(25) , as ASP Service Client above, can include Data Storage Part(22) that can save multi-resolution image manufactured and the Application Part(21) that include image viewer program.

Above Image Manufacturing Client(25) can be down loaded applications necessary for image manufacturing form Operator Server(13) or Developer Server(12), and it can be composed with Application Part(27) and OCX Component Part(28).

Above Netizen Client(24) can include Application Part(26) in order to brows manufactured image after down load image viewer program.

The composition element of servers mentioned above is just an example and possible to execute in various form unless it does not influence on the series of service related image manufacturing, the key element of this invention. That is, ASP Service Operator Server(13) and ASP Service Developer Server(12) can be combined without any problem due to its similarity, and Data base part constructed in each server also has no problem even if the location will be

changed.

Now, practical example for the service of this invention to be provided to Image Manufacturing Client and Netizen Client will be described in detail together with Fig.s(12~30).

Each steps shown on the Fig.s (12~30) can be divided as Multi-Web Server connecting and program downloading Step(201), Log-in Step(102;202~212), ordering and Account Settlement Step(103;213~228), Parameter Transferring Step to OCX Component Part(104;229~230), authentication for the legal usage and usage details Recording Step(105;231~237), Image Input Step((106;238~241), Multi-Resolution Image Reducing Step and Divided Size Calculation Step(107;255~258), Parameter Setting Step for image revision(108;242~271), Saving Step as Divided Multi-Resolution Image and Web Page Manufacturing Step including Image Data Replacement Step(109;272~298), Image Uploading Step(111;299~311) including Releasing Step for compressed single file(110;308~309) and Putting Up Step onto the web to provide manufactured web page to Netizen Client(112;359~417).

And also, parameter setting for the activities of preference survey and advertising such as premium application display or related process can be included in above step. Another explanation on this matter in this invention will be followed later in detail.

In the Multi-Web Server Connecting and Downloading Step(201), Image Manufacturing Client(25) is connected to Multi-Web Server(11), and Image Manufacturing Client(25) executes Program(a6) after transmitting the Program(a5) that enable multi-resolution image manufacturing according to the request(a1) of Image Manufacturing Client(25) following the request(a2) from Server(11).

The program transferred to Image Manufacturing Client(25) from Server(11) composed Application Part(27) and OCX Component Part(28).

The Log-in step(102;202~212) includes ID Input Step(202) that input

ID, Saving Step(203) for input ID to variable shopID, Password Input Step(204), Log-in Step(205), Membership Information DB Connecting Step(206) that connect to Membership Information DB of Server(11) following log-in, Service General Information Table Opening Step(207) of Membership Information DB, and also includes reading folder name of service operator that pre-set when a member joined, reading multi-resolution image saving folder name, reading viewer folder name, saving service operator field value into variable DistributorID, saving the saving folder name field into variable SavePath, saving viewer folder name field into variable ViewPath, as well as general information reading step that close Service General Information Table of for Membership Information DB.

This is for multi-resolution image manufacturing program enable to calculate and control the service details per each ASP Service Operator Server and Image Manufacturing Client and also to manufacture multi-resolution images.

In addition, Membership Information DB herein can exist in ASP Service Operator Server(13) and ASP Service Developer Server(12) as well. Fig. 2 shows an example of service general information table composition and Fig. 6 shows an example of membership information table composition mentioned above.

Ordering and Account Settlement Step(213~228) can include Service Order Control Table Opening Step(213) of Membership Information DB for saving ASP service order details selected by Image Manufacturing Client(25), Service Selecting Step(214) that select the kinds of service, Service Kinds Saving Step(215) that save selected service kinds to variable VrApp, Quantity Input Step(216) that input the quantity to manufacture multi-resolution images, Quantity Saving Step(217) that save the input quantity to variable qty, Settlement Account Calculation Step(218) that calculate settlement account according to the service kinds and quantity, settlement method Input Step(220) that save calculated amount into variable WizAmount and input the settlement method whether by credit card, by on-line transferring, by mobile phone or

e-coin, Saving Step(221) that save input settlement method into variable WizType, Current Time Abstraction Step(222), Saving Step(223) that save abstracted current time into variable WizDate, Order Number Creating Step(224) that create order number by combining ShopID and abstracted current time to create unique numbers, Saving Step(225) that save create order number into variable PurchasID, saving step(226) that save Order Number(PurchasID), Current Time(WizDate), kinds of service(VrApp), quantity(qty), account settlement method(WizType), settlement amount(WizAmount) into service order control table of Membership Information DB in order to save ordering details, Account Settling Step(227) as well as Table Closing Step(228) for service order control of Membership Information DB. Fig. 3 shows the example of composition for Service Order Control Table mentioned above.

The kinds of service that can be selected in Service Selection Step(214) can include two-dimensional enlarged image service by one frame of multi-resolution image, three-dimensional enlarged image service by multi-frame of multi-resolution image, e-catalogue service that gives virtual image as if we are reading book by turn over the pages practically, e-album service that shows photographs in the form of album, panorama image service.

Order Number Creating Step(224) can create order numbers and combine Service Operator (DistributorID), ID(ShopID) and abstracted current time by adding Service Operator (DistributorID) if necessary in case many ASP Service Operator Servers(13) are exist.

The Log-in Step, Ordering and Account Settlement Step are steps processed in application part, the image processing program for multi-resolution image manufacturing is preferable for ActiveX OCX components. Accordingly, interface between Application Part and OCX Component Part is necessary. That is, Application Part is executed from Service Connecting Step(201) in Fig. 12 to Service Order Control Table Closing Step(228) of Membership Information DB in Fig. 13. Hereafter, in Parameter Transferring Step(229~230), relevant parameter is transferred(a7) to OCX Component Part(28) to operate(229) OCX

Component Part(28). This time, transferred parameters are Service Operator (DistributorID), Order Number(PurchasID), Service Kinds(VrApp), multi-resolution image manufacturing Quantity(qty), ID(ShopID), multi-resolution image saving Folder Name(SavePath), Viewer Folder Name(ViewPath), ASP service operation and other items can be added or reduced if necessary. After transferring(c1) the parameter, OCX Component Part is operated(230).

In the authentication for the legal usage and usage details recording step(231~237), ASP Service Developer Server(12) receive the authentication request(b2, b3) upon authentication request(b1), this authentication result(b4, b5) will be transferred to Image Manufacturing Client(25), and then Manufacturing Client(25) check(231) if the execution is progressed in accordance with proper procedure based on the authentication result(b6) received by OCX Component Part(28).

If normal execution has been processed, then next procedure will be followed, if not, transferred(A) to Service Selection Step(214).

There will be a possible problem that any image manufacturing client may use OCX component illegally without additional payment against the intention of ASP Service Operator or ASP Service Developer as OCX component is usually executed successfully after download on the hard disk of client's computer.

Therefore, in order to solve this problem, OCX component has been designed to be executed only in the case that proper authentication has been received from ASP Service Developer Server(12) through Authentication Checking Step(231).

Furthermore, the application for the execution of Authentication Checking Step(231) can be performed through Application Part(15) of ASP Service Operator Server(13) or Application Part(18) of ASP Service Developer Server(12).

If OCX component has been performed through normal procedure,

parameter that transferred through Application Part(27) of Image Manufacturing Client(25) will be saved in developer membership DB of ASP Service Developer Server(12), and then Usage Detail Saving Step(233~237) will be executed by saving usage details that which service and how many multi-resolution image has been manufactured by which ASP Service Operator Server in order to be utilized in account settlement between ASP Service Operators and Developers.

This procedure can be explained more concretely as follows;

After connecting(233) to Developer Membership Information DB; open(234) developer usage detail table; saving(235) parameter values transferred from Application Part(27) of Image Manufacturing Client(25) such as Service Operator(DistributorID), order number(PurchasID), service kinds(VrApp), multi-resolution image manufacturing quantity(qty), ID(ShopID), multi-resolution image saving folder name(SavePath), viewer folder name(ViewPath); and then close(236) the developer usage detail table of developer membership information DB; release(237) the connection of developer membership information DB.

In developer membership information DB connecting step above(233), steps (234), (235), (236), (237) can be simplify if necessary, these steps can be replaced by making folder name or file name, and save it data storage part of server after combining service operator(DistributorID), order number(PurchasID), service kinds(VrApp), multi-resolution image manufacturing quantity(qty) in one.

After OCX component executed and proved it performed through normal procedure by passing authentication and saved the usage details on ASP service developer server(12), regular manufacturing of multi-resolution image will be executed.

Image input step(238~241) includes page variable initialization step(238), original image input step(239) for manufacturing of multi-resolution image by image manufacturing client(25) as well as original image input closing decision step(239) that original image input will be repeatedly executed until final closing

and saving total original image input quantity accumulated(240) every input onto variable page.

And then it includes multi-resolution image reducing step for image and divided size calculation step. Related parameter setting step(242~271) for image processing can includes following procedures.

After original image processed and multi-resolution image created, multi- numbers of tile type file will be existed when upload the created image into server, and it is effective to create single file in order to reduce uploading time since long uploading time is required for uploading indicated server by client among data storage part(17) of ASP service operator server(13) in image manufacturing client(25), data storage part(20) of ASP service developer server(12) and data storage part(22) of ASP client server(14)

Accordingly, in case to create single file in single file decision stage(242),

creating variable will be set as single file by saving(243) 1 onto variable uniq.

There are some cases to take photograph by digital camera in 90 °, that is, to turn the camera vertically depend on the subject. In this case, original image may has to be processed by turning in turning decision step(244) of multi-resolution image processing.

This means, in case to turn original image in turning decision step(244), save and set(248) cw onto variable rot to ensure original image to be turned in clockwise through turning decision step(246), in opposite case, save and set(247) ccw onto variable rot to ensure original image to be turned in anti-clockwise,
in case not to turn in turning decision step, save and set(245) no onto variable rot.

In case the image with dense checks, reduced image may looks dizzy. In order to prevent this effect, the image can be reduced and interpolated in reducing by using interpolation method. In case to apply image interpolation in image interpolation decision(249), save 1 to variable inpr and set for image interpolation in image interpolation initial value input step(250).

The process of multi-resolution image reducing step and divided size calculation step(255~258) is as follows: calculate reducing step of original image through reducing step and calculation step(255); save the calculated reducing step onto variable level(256); calculate width and length to divide reduced image through divided size calculation step(257); save(258) calculated width and length size on variable hor and ver respectively; and finally set variable to divide original image reducing step and reduced image that necessary to create multi-resolution image.

When the pages of original image that was input during original image input step(239) move(265), execute Link-RTN(266) repeatedly until closing in link closing decision step(267)

Image saving step as divided multi-resolution image and web page manufacturing step(272~298) including image data replacement step are as follows:

In operator server selection step(272), if multi-resolution image uploading to operator server selected, save(273) 1 to variable ssver; in developer server selection step(274), if multi-resolution image uploading to developer server selected, save(275) 2 to variable ssver; in client server selection step(276), if multi-resolution image uploading to client server selected, save(277) 3 to variable ssver;

This to protect server from hacking by avoiding exposure of ID and password connect to server, with separate driving of ftp module that upload to server after multi-resolution image created.

Save 0 on variable page 1 through initial value setting step(278) and set initial value, execute reduce-RTN step(279) that reduce as much original image as original image page quantity input in original image input step(239), execute divide-RTN step(280) that divide reduced image, however, execute reduce-RTN step(279) and divide-RTN step(280) repeatedly until accumulated value reached same quantity as input image quantity in original image input step(239) by accumulating 1 each time in variable page 1 through page accumulation

step(281) whenever reduce-RTN step(279) and divide-RTN step(280) executed.

In first page selection step(283), if Netizen client(24) select first page of original image that is input in original image input step(239) as first page, and then save(284) "1" in variable sPpage; and in first page selection step(283), if does not set first page image as first page and designate arbitrary image and set as first page, set the arbitrary page through initial indication image page designation step(285).

In case original images that input in original image input step(239) are more than one, in case next image displayed in order in automatic indication selection step(286) that decide whether next image to be displayed in order when Netizen client(24) reading it, save(288) "1" in variable Auto, otherwise save(288) "0" in variable Auto.

In order to create web page, set variable Auto, sPage, SavePath, ViewPath, Level, PurchasID, hor, ver as parameter(289), and set field, location et. of link data as parameter, and also save created web page(292).

OCX component part(28) process input original image to multi-resolution image in original image input step(239) and manufacture web page, then horizontal/vertical parameter of initial image is transferred(c1) to application part(27) to save horizontal/vertical size as same size as Netizen client(24) read multi-resolution image.

Application part(27) deliver(c3) horizontal/vertical parameter(c2) to ASP service operator server through network(10), connect(249) inquiry number DB to save in inquiry statistic table of inquiry number DB, save(c4)(296) horizontal and vertical by opening inquiry statistic table of inquiry number DB, close(297) inquiry statistic table of inquiry number DB, release the connection of inquiry number DB.

Fig. 5 shows the composition example of inquiry statistic table.

Finally, in uploading(108) the created multi-resolution image and web page to server, if variable ssver in operator server decision step(229) is 1, deliver(d2) the web page(d1) related to multi-resolution image created by connecting(300) to

operator server(13), save(d3) by uploading(301) to data storage(17), if variable ssver in developer server decision step(302) is 2, deliver(d4) the web page(d1) related to multi-resolution image created by connecting(303) to ASP service developer server(12), and save(d5) to data storage part(20) by uploading(304), if variable ssver in client server decision step(305) is 3, deliver(d6) the web page(d1) related to multi-resolution image created by connecting(306) to ASP service client server(14), and save(d7) to data storage part(22) by uploading(307).

In releasing step for compacted single file, if variable uniq is 1 in single file creating decision step(308) after completion of uploading to server, release(309) the compaction of single file uploaded on server.

If repeated execution will be performed in repeat decision step(310) that decide whether repeated execution of multi-resolution image manufacturing to be performed, bifurcate(A) to service selection step(214), otherwise release the server connection through server connection release step(311) and close the service.

From now on, Link-RTN, reduce-RTN, divide-RTN will be explained in detail.

In Link-RTN to input text, input(313) text data in text input selection step(312) and save the input data(314); if voice link has been selected in voice link selection step(313), link voice data through voice data link step(316) and save linked data; designate hot spot location through hot spot selection step(318), hot spot location designation step(319), and save hot spot location through hot spot location saving step(320); if image link has been selected in image link selection step(321), insert image to be linked through link image insert step(322); input web address to be linked when click link image through link address input step(323), save link data through link data saving step(324).

Fig. 21 shows practical example of inquiry reception process.

If field has not been selected in decision step(325) for inquiry number field selection, bifurcate to 331 step; in case field has been selected, input(326)

field name; save(327) field name in RefName folder; create(328) RefName field in inquiry reception table; create(329) reading start time(RefTS) field; create(330) reading close time(RefTE) field.

As next step, premium setting selection step(331) is followed and input(332) event period starting date, save(333) starting date in variable EventS, input(334) event period closing date, save(335) the closing date in variable EventE and create(336),(337) EventS field and EventE field in inquiry reception table.

Fig. 31 and 32 show practical example that popup link page when a certain page clicked after designated as link field.

In reduce-RTN, input 1 to variable N for initialization through initialization step(338), and execute image interpolation initial value input step(250). If decided to interpolate in the interpolation method decision step(339) that to decide whether "1" saved in variable Inpr by execution of image interpolation initial value input step(250), then decide interpolation through interpolation method application step(340). If decided not to apply interpolation method in interpolation method decision step(339) above, then do not apply the interpolation method.

Clockwise rotation decision step(342) is to decide whether input clockwise initial value has been done when non-rotation decision step that decide if non-rotation initial value executed(341) is false.

If this Clockwise rotation decision step(342) is true, rotate original image to clockwise direction. If the Clockwise rotation decision step(342) above is false, rotate original image to anti-clockwise direction through anti-clockwise rotation decision step(344).

Reduce image by 50% through image reduce step(345), and decide whether reduce step value that obtained from reduce step decision step is correspond to the level value accumulated variable N by 1 per each step. If not correspond, save multi-resolution image through image saving step(349). Execute above step repeatedly until value of variable N correspond to the value

of reduce step that obtained from reduce step calculation step(255), and if correspond, execute image data replacement(347) and data saving step(348),

Image data replacement(347) above is the work to enable reading only by viewer program provided by mixing the image data fields in order to prevent illegal usage of manufactured image on other ordinary viewer program.

This time, the object of image replacement can be initial images only in consideration of possible lower processing speed and in case security has to be considered important, then can be executed on entire images.

Fig. 9 is the composition example of image data before replacement, and Fig. 10 is the composition example of image data after replacement

In divide-RTN, execute initialization by saving '0' in initial divide value in divide initialization step(352), decide whether loaded image is the image to be replaced through image decision step(354). If it is the image to be replaced to prevent illegal usage, then replace(355-1) the image as per Fig. 10, if not, execute image divide step(355).

Including input image from original image input step(239) through image divide step(355), load each image reduced in reduce-RTN(279) in loading step(353), and divide each image by horizontal and vertical, save divided image through image saving step(356), accumulate 1 to variable Q1 through divide accumulating step(357), close divide closing decision step(358) if it is true, interpolate to image loading step(353) if it is false.

Fig. 11 is the example of image that was reduced and divided through routine above.

Web put up step(112:359~417), to provide manufactured web page to Netizen client, can include Viewer Program Download Step(113:359~361), Initial Image Download and Display Step(114:362~372) and Image Reading Support Step(115:390~417).

Furthermore, the procedure related to advertising activities such as preference survey, premium application display etc. can be added in above step as we explained previously.

Further explanation will be followed separately after the Detailed Description of the Invention.

Viewer Program Download Step mentioned above will be connected to the service site that provide multi-resolution image through Service Site Connection Step(359). If it is the first connection in First Connection Decision Step(360), it will be transferred(e2) to ASP Service Operator Server(13) through Network(10) by the request(e1) of Netizen Client(24) through Program Download Step(361), and can include the Step(113) that download(e9) Viewer Program(e4) which can display multi-resolution image saved in Data Storage Part(17) by the order(e3) of Application Part(15).

In case Viewer Program which can display multi-resolution image has been saved in ASP Service Developer Server(12), the request(e1) of Netizen Client(24) will be delivered to ASP Service Developer Server(12) through Network(10). According to the order(e7) of Application Part(15), it can be composed to download(e9) Viewer Program(e8) that can display multi-resolution image saved in Data Storage Part(20), and also if the Viewer Program which can display multi-resolution image has been saved in ASP Service Client Server(14), deliver(e10) the request(e1) of Netizen Client(24) through Network(10). And also can be composed to enable download(e9) Viewer Program(e12) which can display multi-resolution image that saved in Data Storage Part(22) in accordance with the order(e11) of Application Part(21).

Image Download and Display Step execute downloaded program through Program Executing Step(362); in case text data are exist in Text Data Decision Step(363), display text through Text Data Display Step(364); in Program Executing Step(362) above, decide if any voice data are exist through Voice Data Decision Step(365), play voice data through Voice Data Play Step(366) if any voice data are exist in the Voice Data Decision Step(365); download initial image from Data Storage Part(17~20~22) through Initial Image Download Step(367); display downloaded initial image through Initial Image Display Step(368); in Automatic Page Turning Decision Step(369) that decide if the

value obtained from Next Page Automatic Display Initial Value Setting Step((287,288) is the value to display next page automatically, if the value is true, then decide whether next pages are exist through Next Page Existence Decision Step(370), if next pages is exist, then download next page image through Next Page Image Download Step(371), display next page through Next Page Image Display Step(372), and if not, bifurcate next step of Next Page Image Display Step(372).

In Step(115) that support image reading through viewer program of Netizen, there is mouse event in Mouse Event Decision Step(373) that decide if there is any mouse movement, and execute ZoomOut-RTN (391) in case to receive reducing order in Reduce Order Decision Step(390).

In ZoomOut-RTN (391), display(444) reduced image; in Inquiry Reception Table Closing Decision Step(445) of Inquiry Number DB, if the value of variable is 1, close the Inquiry Reception Table through Inquiry Reception Table Closing Step(446); release the connection of Inquiry Number DB through Inquiry Number DB Connection Releasing Step(447); , if the value of variable Zoom is not 1, bifurcate next step of Inquiry Number DB Connection Releasing Step(447).

In Drag Order Decision Step(392), if drag order is received, drag displayed image through Image Drag Step(393).

In Front Page Movement Order Decision Step(394), if front page movement order received, display front page image through Front Page Image Display Step(395); in Next Page Movement Order Decision Step(396), if next page movement order received, display next page image through Next Page Image Display Step(397); in First Page Movement Order Decision Step(398), if first page movement order received, display first page image through First Page Image Display Step(399); in Last Page Movement Order Decision Step(400), if last page movement order received, display last page image through Last Page Image Display Step(391).

In Help Text Order Decision Step(402), if help text order received,

display help text page through Help Text Page Display Step(403); in Link Mark Display Decision Step(404), if link mark display order received, display link mark through Link Mark Display Step(405); in Link Mark Hiding Order Decision Step(406), if link mark hiding order received, hide link mark through Link Mark Hiding Step(407); in Contents Decision Step(408), if contents display order received, display contents through Contents Display Step(409); in Total Enlarge Decision Step(410), if total enlarge order received, enlarge the display as same screen size as initial image screen displayed in reading multi-resolution image through Screen Size Standard Enlarge Step(411).

In Partial Enlarge Decision Step(412), if partial enlarge order received, enlarge the display one quarter screen size of initial image screen displayed in reading multi-resolution image by Netizen Client(24) through Enlarging Step(413), in separate enlarged screen.

Initialize by saving(414) 0 in variable n; execute RefLink-RTN(415); otherwise accumulate(416) in variable n; in Final Decision Step(417), close if true; otherwise bifurcate (k) in order to ready for mouse event.

In Reading Closing Step(417), if mouse event does not select closing of web page reading, bifurcate to k, and close otherwise

To enable preference survey and advertisement for the commodities of Netizen Client is another purpose of this invention, and this is possible by adding some necessary routine. The practical example can be explained as follows by using some relevant symbols in the drawing.

First of all, it is possible to popup or transmit the text for public information and advertisement under a certain condition, and also can be considered to popup premium application display. In this case, step for inquiry elapsed time or setting for web address to popup, step for inquiry elapsed time decision by Netizen clients, step for web page popup in case preset inquiry elapsed time is over, can be added.

To explain concretely, in parameter setting step for image processing in image manufacturing, after a certain time passed from the opening of

multi-resolution image web page by Netizen clients(24), activate pop-up text for commodity advertisement, or activate premium application window in case over the set time for browsing elapse time(PTime) for transmit to IP address by Netizen clients, or input(251) browsing elapse time(RTime) for transmission to IP address of Netizen clients(24), and save(252) input browsing elapsed time in variable Ptime.

Input(253) web address(PopUpDoc1) to be displayed pop-up after browsing elapsed time and web address(PopUpDoc2) to be displayed pop-up after inquiry elapse time, save web address to be displayed pop-up in variable PopUpDoc1 after set browsing elapsed time, and time setting is possible so that pop-up to be activated for premium page or advertising text or to be transferred to IP address of Netizen clients(24) if a certain time is elapsed when Netizen clients(24) browse multi-resolution image web page through the step to save(254) the web address to be displayed pop-up to variable PopUpDoc2 after the set inquiry elapse time.

Also, in web page manufacturing step, the name of web page to be displayed pop-up will be saved(290) as parameter.

In Inquiry Elapsed Time Decision Step and Browsing Information Decision Step of Netizen Clients, decide existence of mouse movement in Mouse Event Existence Decision Step(373), and if yes, abstract the current time as year, month, day, hour, minute, second based on the server(11) that provide ASP service through Current Time Abstract Step(374).

Save Current Time abstracted through Current Time Saving Step(375), abstract(376) IP address of Netizen client(24), save extracted IP address to variable CurrentIP through IP Address Saving Step(377), abstract the name of web page that currently browsed by Netizen client through Web Page Name Abstract Step(378), save extracted web page name to variable CurrentName through Web Page Name Saving Step(379).

Open inquiry reception table of inquiry number DB through Inquiry Reception Table Opening Step(384) of inquiry number DB, save web page name,

CurrentName, that browsing by Netizen client(24) to the browsed web page name (NetPurchasID) field of Inquiry Reception Table through Web Page Name Saving Step(385),

Save IP Address of Netizen client(24), CurrentIP, to NetIpAddress field of Inquiry Reception Table through IP Address Saving Step(386), save Current Time in OpenTS field, the web page browsing start time of inquiry reception table through Current Time Saving Step(387), close Inquiry Reception Table of inquiry number DB through Inquiry Reception Table Closing Step(388) of inquiry number DB, release the connection of inquiry number DB through Inquiry Number DB Releasing Step(389).

Through above process, the starting time of browsing for multi-resolution image by Netizen client(24), IP Address and browsing web page name can be saved in DB, additional information can be provided by activation prepared pop-up of the web page related to advertisement or relevant information to Netizen client(24), after a certain time has been passed after browsing, and also can provide or deliver direct mail or relevant information to the address of Netizen client(24).

In case preset inquiry elapse time is over, the steps to activate pop-up will be as follows: save(448) the time stored in variable CurrentTime to variable FirstTime; abstract Current Time through Current Time Abstract Step(449) above; save(450) Current Time of server to variable NewTime; save(451) the elapse time that calculated by reducing previous time(FirstTime) from current time (NewTime) to variable Dtime; decide whether the variable ExPop is 1 or not through Pop-up Execution Exsistence Step(452); and if not 1, that is, pop-up has not been executed in Pop-up Execution Exsistence Step(452); decide whether the value saved in variable Dtime is higher than the value saved in variable Ptime, through Browsing Elapse Time Decision Step(453); the value saved in variable Dtime is higher than the value saved in variable Ptime, activate pop-up PopUpDoc1 page through Pop-up Step(454) or transfer to IP Address of Netizen client(24); if the time to start browsing for inquiry frequency survey field on

specific area is longer than the time preset elapse time(RTime) in Inquiry Elapsed Time Decision Step(455), activate preset pop-up page PopUpDoc2 or transfer(456) to IP Address; save 1 to variable ExPop in order to notify that pop-up or transmission has been executed through Pop-up Execution Initialization Step(457), and close.

And decide whether variable ExPop is 1 or not, through Pop-up Execution Existence Decision Step(452), if 1, then close ZoomOut-RTN.

In order to survey preference of client's goods, following steps can be added: Parameter Setting Step in relation to inquiry elapse time on hot spot field and web address to be activated pop-up; Inquiry Number Selection Decision Step that decide whether the hotspot field is for inquiry number survey; Browsing Information Collecting Step of Netizen client for hotspot field; Recording Step for the result on inquiry number recording DB; and Premium Setting Step for hotspot field.

The steps to set the inquiry elapse time and web address for pop-up related to hotspot mentioned above are as follows: in parameter setting step for image processing in image manufacturing, select and set whether to perform inquiry frequency survey on preset field when browsing multi-resolution image through Inquiry Number Selection Decision Step(259); if select inquiry frequency survey, connect to inquiry number DB through Inquiry Number Connection Step(260); save(263) inquiry elapse time(RTime) by opening(261) Inquiry Reception Table of inquiry number DB; save(264) pop-up address(PopUpDoc2); if preset inquiry number survey in Inquiry Field Decision Step(268), close(269) inquiry reception table of inquiry number DB; can preset to release(271) connection of inquiry number DB.

In addition, following procedure can be added; if selected to survey inquiry frequency number by designate hotspot field as inquiry number field through Inquiry Number Field Selection Step(325), in put field name through Field Name Input Step(326); save(327) input field name to variable RefName; create(328) Field Name (RefName) onto Inquiry Reception Table of inquiry

number DB; create(329) Browsing Start TimeField(RefTS); create(330) Browsing Close TimeField(RefTE).

In Fig. 16, if survey of inquiry number has been preset in Inquiry Number Field Decision Step(268), close(269) Inquiry Reception Table of inquiry number DB and add the Step to Release(271) inquiry number DB connection.

In Inquiry Number Selection Decision Step to decide if hotspot field is for inquiry number survey, save 0 to variable n in Inquiry Number Browsing Initialization Step(414) when Netizen client browse manufactured image, browse inquiry frequency number through RefLink-RTN(415), accumulate 1 to variable n through Inquiry Number Accumulation Step(416) after browsing, in Closing Decision Step(417), close if true, otherwise bifurcate(k) in order to ready for mouse event.

In browsing information collection step of Netizen client for hotspot field, in case the result is true in Link Inquiry Number Decision Step(419), decide if the mouse event is enlargement order through Inquiry Number Enlargement Order Decision Step(421), and abstract field name through Field Name Abstract Step(422).

Abstract current time of server through Current Time Abstraction Step(423), save extracted field name to variable ViewName through Field Name Saving Step(424), save extracted current time to variable ViewTimeS through Current Time Saving Step(425).

Connect inquiry number DB through Inquiry Number Connection Step(426), open Inquiry Reception Table of inquiry number DB through Inquiry Reception Table Opening Step(427), save extracted ViewName to RefName Field of Inquiry Reception Table through Field Name DB Saving Step(428),

save extracted ViewTimeS to RefTS Field of Inquiry Reception Table through Current Time DB Saving Step(429).

Through Inquiry Number Enlargement Order Initialization Step(430), if mouse location is in Link Field, if Link Field id for Inquiry Number Survey, and if Mouse Event is enlargement order, then save 1 to variable Zoom. And decide

if Mouse Event is enlargement order through Inquiry Number Enlargement Order Decision Step(421). If it is true, then save 0 to variable Zoom through Inquiry Number Non-Enlargement Order Initialization Step(431)

In the step to record the inquiry result onto the DB for Inquiry Number Recording, following procedure can be added: connect to Inquiry Number DB through Inquiry Number DB Connection Step(380); open Inquiry Statistic Table of Inquiry Number DB through Inquiry Statistic Table Opening Step(381) of Inquiry Number DB, accumulate 1 to Current Connection Netizen Number(NetNo) of Inquiry Statistic Table of Inquiry Number DB through Connecting Number Accumulation Step(382), and also the step to close Inquiry Statistic Table of Inquiry Number DB through Inquiry Statistic Table Closing Step(383) of Inquiry Number DB.

In case to set premium in Premium Setting Selection Step(331), input event period starting day through Event Period Starting Day Input Step(332), save(333) the input starting day in variable EventS, input the event period closing day through Event Period Closing Day Input Step(334), save(335) the input event closing day in variable EventE, create(336) event starting day(EventS) field at Inquiry Reception Table of inquiry number DB, and create(337) event closing day(EventE) field at Inquiry Reception Table of inquiry number DB.

On the occasion of browsing by Netizen client in Premium Link Decision Step(432), if true, then decide if Inquiry Number Accumulation Step(416) executed 1 only, therefore, if the Premium Page Loading is the first time through Premium Page Previous Execution Decision Step(433), then loading Premium Page that can apply the premium through Premium Page Loading Step(434), decide if existing member through Existing Member Decision Step(435); in case not existing member, then suggest to join as a member through Affiliation-RTN(436); in case verified as existing member in Existing Member Decision Step(435), input ID through ID Input Step(437); connect to premium member DB through Premium Member DB Connection Step(438); open Member Information

Table of Premium Member DB through Member Information Table Opening Step(439) of Premium Member DB; save ViewTimeS in Premium Application Date(NDate) Field of Premium Member DB; save(441) "0" in Premium Application Existence(NOX) Field of Premium Member DB; close Member Information Table of Premium Member DB through Member Information Table Closing Step(442) of Premium Member DB; release connection of Premium Member DB through Premium Member DB Connection Releasing Step(443).

Fig. 4 shows example of composition of Inquiry Reception Table mentioned above.

Fig. 33 shows example of practical work of Premium Application Form.

In addition to the equipments and methods described above, this invention can also provide ordinary people, who purchase and operate shopping mall that possessed and supplied in bundling by shopping mall engine developing company, so that the ordinary users can manufacture multi-resolution image and provide to other people easily, by providing as shopping mall engine developing company supply multi-resolution image manufacturing program and viewer program to middle/large scale portal site.

Furthermore, this invention provides not only in bundling to shopping mall engine but also to general application program such as POS(Point Of Sales), human resources and payment management program, material/inventory control program in bundling so that the application program can be purchased and used, and then in case multi-resolution image required, it can be used conveniently as per required kind of service and quantity in accordance with the procedure of this invention.

So far some useful practical examples are described on this invention.

Anybody who has basic knowledge in the field of this invention can understand fundamental features of the invention that can present in various forms of application.

In addition to some example of the application described above, this invention can provide any transformed application practically from

non-fundamental part, for example, any mutual link, transmission or functional unification of specific data base between ASP Service Developer Server and ASP Service Operator Server will be allowed in the range unless it cause any harmful effect to the nature of this invention , especially, composing elements such as practically expected variable and values saved in the variable can be added or reduced or revised if necessary.

Therefore, the practical examples described above have to considered not in limited point of view but illustrative point of view. The scope of the invention is mentioned not in the description above but presented in the category of patent application and all the differences in the same scope should be construed as included in this invention.

【Industrial Applicability】

According to the external appearance of this invention, it may looks as operator provide the total process from manufacturing to the application of business that used manufactured image, and amazing growth of related market is expected since image manufacturing clients can make multi-resolution image without any professional know-how and can uploading to sever, put-up on web as well easily and with low cost.

And by checking OCX component if the usage is appropriate, proper user paid monthly fee can use in ordinary process and users who has not proceed payment may be restricted. Therefore, developer and operator can be ensured increased turnover and proper profit. Furthermore, clear account settlement between developer and operator can be achieved by the record of the usage details.

As an additional effect of this invention, the business owners can expect efficient advertisement and sales of the commodities by analysis of trends and features of Netizens through the study for the inquiry numbers based on the multi-resolution images linked to DB for a specific region.

CLAIMS

1. In the method to execute ASP Service that provide multi-resolution images using Multi-Web Server(11),

a) the step that Image Manufacturing Client connect to Multi-Web Server(11);

b) the step that Multi-Web Server(11) download Image Manufacturing Program composed by Application Part(27) and OCX Component Part(28) to Image Manufacturing Client;

c) the step that Application Part(27) deliver parameters to manufacture necessary information for uploading to OCX Component Part(28);

d) the step that Image Manufacturing Client input image by using OCX Component Part(28) above;

e) the step that setting relevant parameter for image processing, including multi-resolution images reducing step and divided size calculation step which are executed in OCX Component Part(28);

f) the step that web page manufacturing including the step to save divided multi-resolution images and image data replacement step which are executed in OCX Component Part(28);

g) the step that uploading to server designated by Image Manufacturing Client by using OCX Component Part(28);

h) the step to put up on web by using the server designated by client in step g), in order to provide web page, which is made and uploaded by Image Manufacturing Client, to ordinary Netizen client; ASP service method to provide multi-resolution images in multi-web server, that has features to includes all above steps.

2. In claim 1, after execution above b) step,

ba) the step(202~212) that Image Manufacturing Client, in between Application Part(27) and Multi-Web Server(11), log-in for member's

authentication;

bb) the step(213~228) that Image Manufacturing Client, in between Application Part(27) and Multi-Web Server(11), execute service order and account settlement; ASP service method to provide multi-resolution images in multi-web server, that has features to includes above step.

3. In claim 2, after execution above bb) step,

bc) the step(229~230) that Application Part(27) deliver parameters necessary to record appropriate authentication and detail of the usage to OCX Component Part(28);

bd) the step(231~237) to authenticate appropriate usage that processed order and account settlement before image manufacturing in between Application Part(27) and Multi-Web Server(11), and to record usage details to relevant DB by delivery Image Manufacturing Client's usage details to Multi-Web Server(11) in OCX Component Part(28); ASP service method to provide multi-resolution images in multi-web server, that has features to includes above step.

4. In claim 1, after execution above g) step,

the step to release and save abstraction in case uploading file extracted in single file; ASP service method to provide multi-resolution images in multi-web server, that has features to includes above step.

5. In claim 1, the parameter setting step of Step e) includes to set Inquiry Elapsing Time and web address to be activated pop-up so that advertising test or premium application window to activate or deliver to IP address of Netizen client in browsing, in case the web page browsing time has been over by a certain period;

and Step h) is the step to activate pop-up the web page preset as above, in case Inquiry Elapsing Time has been over by a certain preset period by the

decision of web page inquiry elapsing time of Netizen client. ASP service method to provide multi-resolution images in multi-web server, that has features to includes above step.

6. In claim 1, the parameter setting step of Step e) includes, in addition, the step to set Hotspot Field Inquiry Elapsing Time and Web Address to be activated pop-up, in case if the Hotspot Field, in image manufacturing for the survey of preference for client's commodities, is for investigation of inquiry number;

and the Step h) is the step for Inquiry Number Selection Decision Step that decide if the Hotspot Field, in image manufacturing for the survey of preference for client's commodities, is for investigation of inquiry number; Browsing Information Collection Step of Netizen client on designated field; the step to record the result in DB for Inquiry Number Recording; ASP service method to provide multi-resolution images in multi-web server, that has features to includes the steps additionally.

7. In claim 6, above Step e) includes additionally the step to set Premium Related Information by bifurcation to Premium Setting Step in case to set premium for designated field, Step h) is to load Premium Page for the first loading case only; the step to proceed Member's Affiliation for new members only by verification whether existing or new member; ASP service method to provide multi-resolution images in multi-web server, that has features to includes the step to record Participation Information of premium members on relevant DB additionally. ASP service equipment to provide multi-resolution images in multi-web server, that has features to includes the steps additionally.

8. In the ASP service equipment to support image manufacturing and to provide divided image of multi-resolution image, and provides program to process divided image of multi-resolution image, with ASP service developer

server(12) that include DB Part(19), Storage Part(20) and Application Part(18); Image Manufacturing Client(25) that composed Application Part(27) and OCX Component Part(28) with downloading image manufacturing program by Multi-Web Server(11) including ASP Service Operator Server(13) which operate middle/large scale portal site including DB Part(16), Storage Part(17) and Application Part(15); and with ordinary Netizen Client(24).

ASP service method to provide multi-resolution images in multi-web server, that has features to be connected, on the basis of Internet Communication Net, to above steps.

9. In claim 8, the Multi-Web Server(11) is ASP service equipment to provide multi-resolution images that has features the ASP Operator Server(13) and ASP Developer Server(12) have been integrated in one server.

10. In claim 8, the Multi-Web Server(11) is operated by Image Manufacturing Client(25) and includes Storage Part(22) and Application Part(21), includes, in addition, the ASP Service Client Server(14). ASP service equipment to provide multi-resolution images include above features.

11. In claim 8, the DB Part(16) of ASP Operator Server(13) includes Member's Information DB to save the preset information in affiliation of new member, as well as to save order and account settlement details, and the DB Part(19) of ASP Developer Server(12) include DB to record developer usage details to register on Developer Usage Details DB when Image Manufacturing Client(25) manufacture divided multi-resolution image by executing divided multi-resolution image manufacturing program. ASP service equipment to provide multi-resolution images that has the features to includes functions describe above.

12. In claim 8, DB Part(19) of ASP Service Developer Server(12) and DB

Part(16) of ASP Service Operator Server save preset information in affiliation of new member, and includes the preset information in affiliation of new member, as well as to save order and account settlement details, ASP service equipment to provide multi-resolution images that has the features to includes functions describe above.

13. In claim 8, DB Part(19) of ASP Service Developer Server(12) and DB Part(16) of ASP Service Operator Server includes Premium Member Control DB to register on Premium Member DB by activating pop-up of premium application window after a certain elapsing time has passed when Netizen Client(24) browse hotspot field of multi-resolution images. ASP service equipment to provide multi-resolution images that has the features to includes functions describe above.

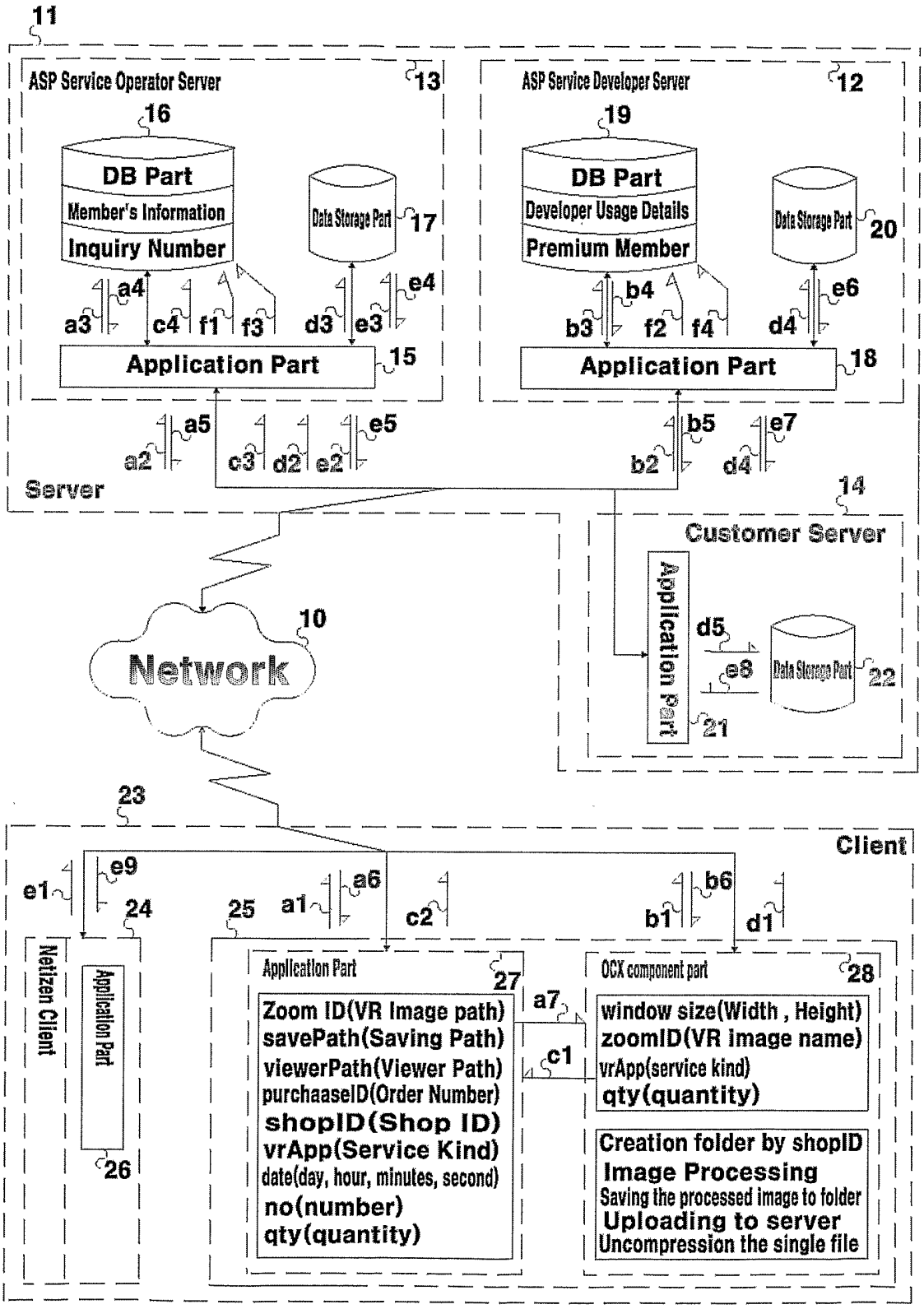
14. In claim 8, DB Part(19) of ASP Service Developer Server(12) and DB Part(16) of ASP Service Operator Server is ASP service equipment to provide multi-resolution images that has the features to includes Inquiry Number Recording DB to save and control inquiry number when Netizen Client browse hotspot field of multi-resolution images that has been designated by Image Manufacturing Client(25).

15. In the method to execute Multi-Web Server(11) using Multi-Web Server(11), the process to transfer parameters mutually between Application Part(15,18,27) and OCX Component Part(28), multi-resolution image manufacturing process through parameters mentioned above, the process to upload the images to Web Server(11), the process to browse uploaded images on the web by client(Netizen's terminal), ASP service method to provide multi-resolution images on multi-web server that has the features to includes functions describe above.

16. In claim 15, the process that upload multi-resolution images to Multi-Web Server(11), include the step to save folder name to parameter, SavePath, that has been delivered from Application Part (15,18,27) to OCX Component Part(28), the step to save web page name for put-up on web to parameter, PurchasID, that has been delivered from Application Part (15,18,27) to OCX Component Part(28), ASP service method to provide multi-resolution images on multi-web server that has the features to includes steps describe above.

17. In claim 15, multi-resolution images manufacturing process is ASP service method to provide multi-resolution images on multi-web server that has the features to includes additionally the step to create by combining ID(ShopID) for new web page creation and abstracted current time.

FIG. 1


11
ASP Service Operator Server
13
16
DB Part
Member's Information
Inquiry Number
Data Storage Part
17
a4
a3
c4
f1
f3
d3
e3
e4
Application Part
15
ASP Service Developer Server
12
19
DB Part
Developer Usage Details
Premium Member
Data Storage Part
20
b4
b3
f2
f4
d4
e6
Application Part
18
a5
a2
c3
d2
e2
e5
b5
b2
d4
e7
Server
14
Customer Server
Application Part
d5
e8
Data Storage Part
22
21
10
Network
23
Client
e1
e9
24
25
a1
a6
c2
b1
b6
d1
Netizen Client
Application Part
26
Application Part
27
Zoom ID(VR Image path)
savePath(Saving Path)
viewerPath(Viewer Path)
purchaaseID(Order Number)
shopID(Shop ID)
vrApp(Service Kind)
date(day, hour, minutes, second)
no(number)
qty(quantity)
a7
c1
OCX component part
28
window size(Width , Height)
zoomID(VR Image name)
vrApp(service kind)
qty(quantity)
Creation folder by shopID
Image Processing
Saving the processed image to folder
Uploading to server
Uncompression the single file

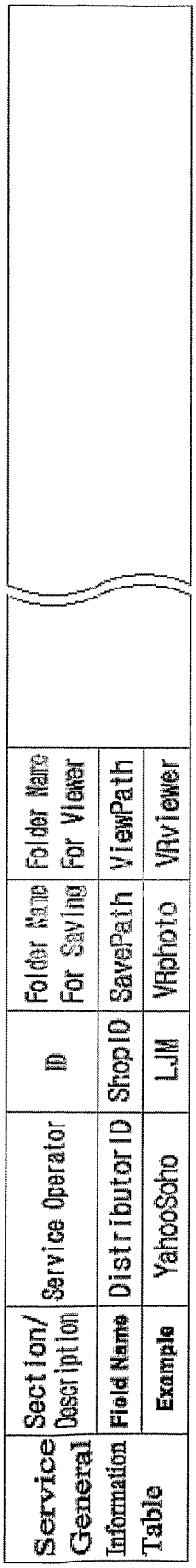

Service General Information Table
Section/ Description
Field Name
Example
Service Operator
DistributorID
YahooSoho
ID
ShopID
LJM
Folder Name For Saving
SavePath
VRphoto
Folder Name For Viewer
ViewPath
VRviewer

FIG. 2

Service Order Control Table	Section/ Description	ID	Order Number	Date	Kind	Qty	Account Settlement	
							Method	Amount
	Field Name	ShopID	PurchasID	WizDate	VrApp	qty	WizType	WizAmount
	Example	LJM	LJM021239592D2	0212311259	2D	2	VISA	10,000

FIG. 3

Inquiry Reception Table

Section/ Description	Browsed Web Page Name	Netizen IP Address	Whole Web Pages Browsing		Premium Event Period	
			Starting Time	Closing Time	Starting Time	Closing Time
Field Name	NetPurchasID	NetIpAddress	OpenTS	CloseTE	EvntS	EvntE
Example	LJM02123959202.htm	211201220259 59	12:10:15	12:15:15	02/12/20	02/12/31

Pop-up After Elapsed Time In Web Page Browsing		Inquiry Field Browsing			
Elapsed Time	Pop-up Address	Name	Starting Time	Closing Time	
PTime	PopUpDoc1, PopUpDoc2	RefName	RefTS	RefTE	
10:30	http://www.vrphoto.com/popup/doc1.html	カメラ	12:10:20	12:12:20	

FIG. 4

Inquiry Statistic Table												
Section/ Description	Browsed Web Page Name	Currently Connected Netizen Number	Wep Page Browsing		Viewer Window Size		Browsing Inquiry Area					
			Times	Browsing Time	Horizontal	Vertical	Name	Times	Browsing Time			
Field Name	NetPurchasID	NetNo	OpenNo	OpenTime	hor	ver	OnRName	OnRNo	OnRTime			
Example	LJM02123959202.htm	50	10	30:10:15	400	500	camera	10	03:12:20			

FIG. 5

Member's Information Table													
Section/ Description	Name	ID	E-mail Address	Sex	Ages	Postal Number	Address	Interesting Field	Premium Application	
									Date	Yes/No
Field Name	NetName	NetID	NetEmail	NetSex	NetYear	NetZip	NetAddress	NetHobby	NDate	NOX
Example	Yoseph	Yoseph	son@mailDM.com	Male	8	278-895	[illegible]	Game	02/12/31	0

FIG. 6

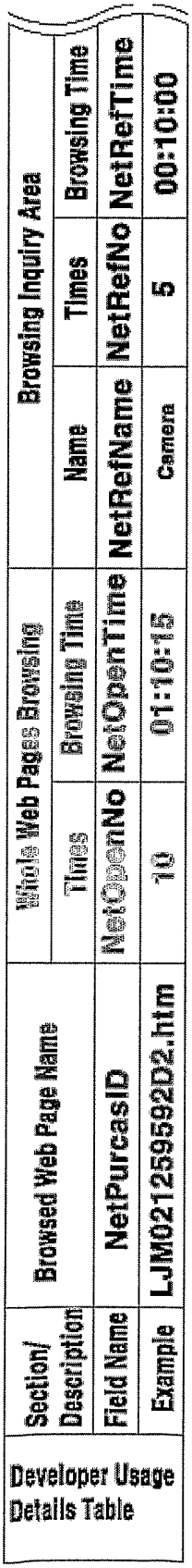

Developer Usage Details Table
Section/ Description
Field Name
Example
Browsed Web Page Name
NetPurcasID
LJM021259592D2.htm
Whole Web Pages Browsing
Times
NetOpenNo
10
Browsing Time
NetOpenTime
01:10:15
Browsing Inquiry Area
Name
NetRefName
Camera
Times
NetRefNo
5
Browsing Time
NetRefTime
00:10:00

FIG. 7

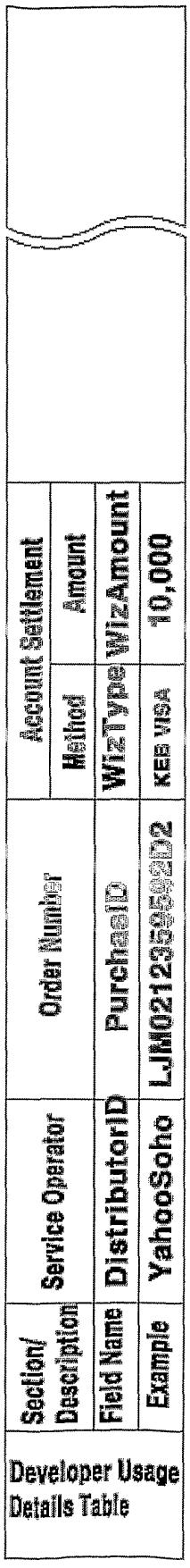

Developer Usage Details Table
Section/ Description
Field Name
Example
Service Operator
DistributorID
YahooSoho
Order Number
PurchaseID
LJM0212359592D2
Account Settlement
Method
WizType
KEB VISA
Amount
WizAmount
10,000

FIG. 8

FIG. 9

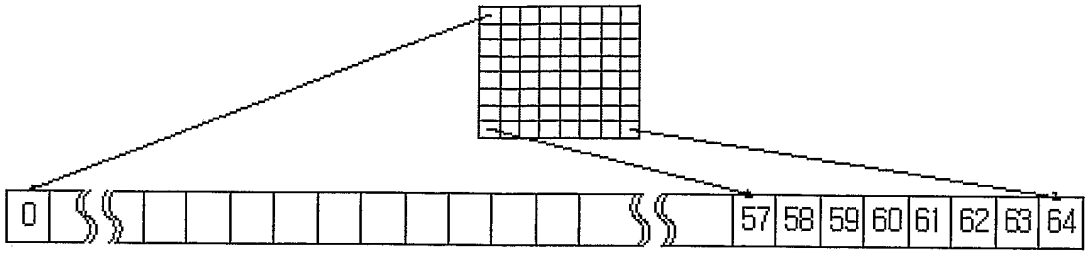


FIG. 10

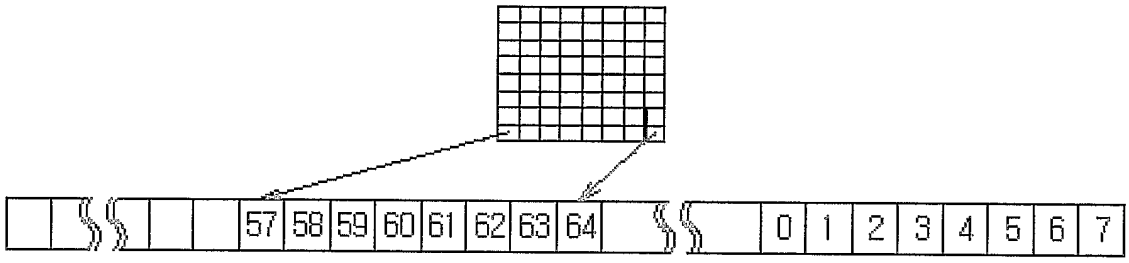
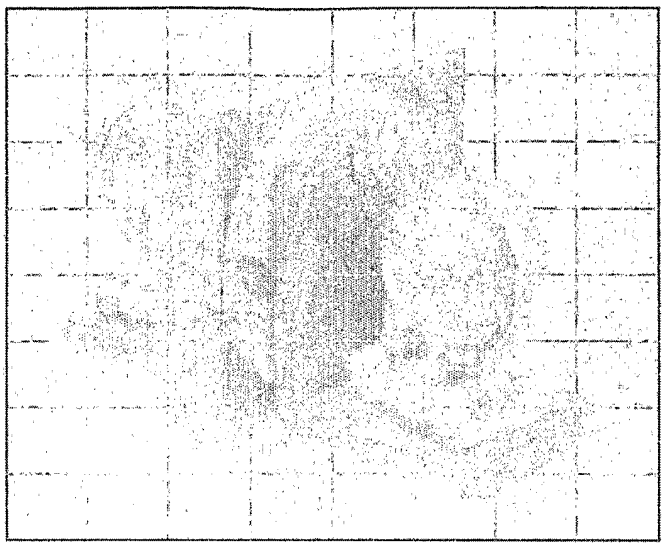
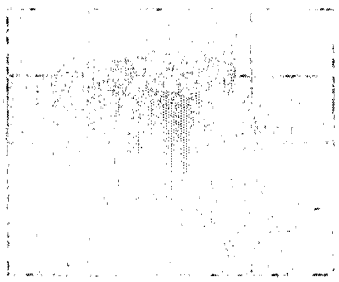


FIG. 11





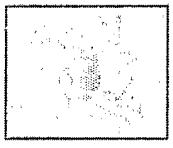




FIG. 12

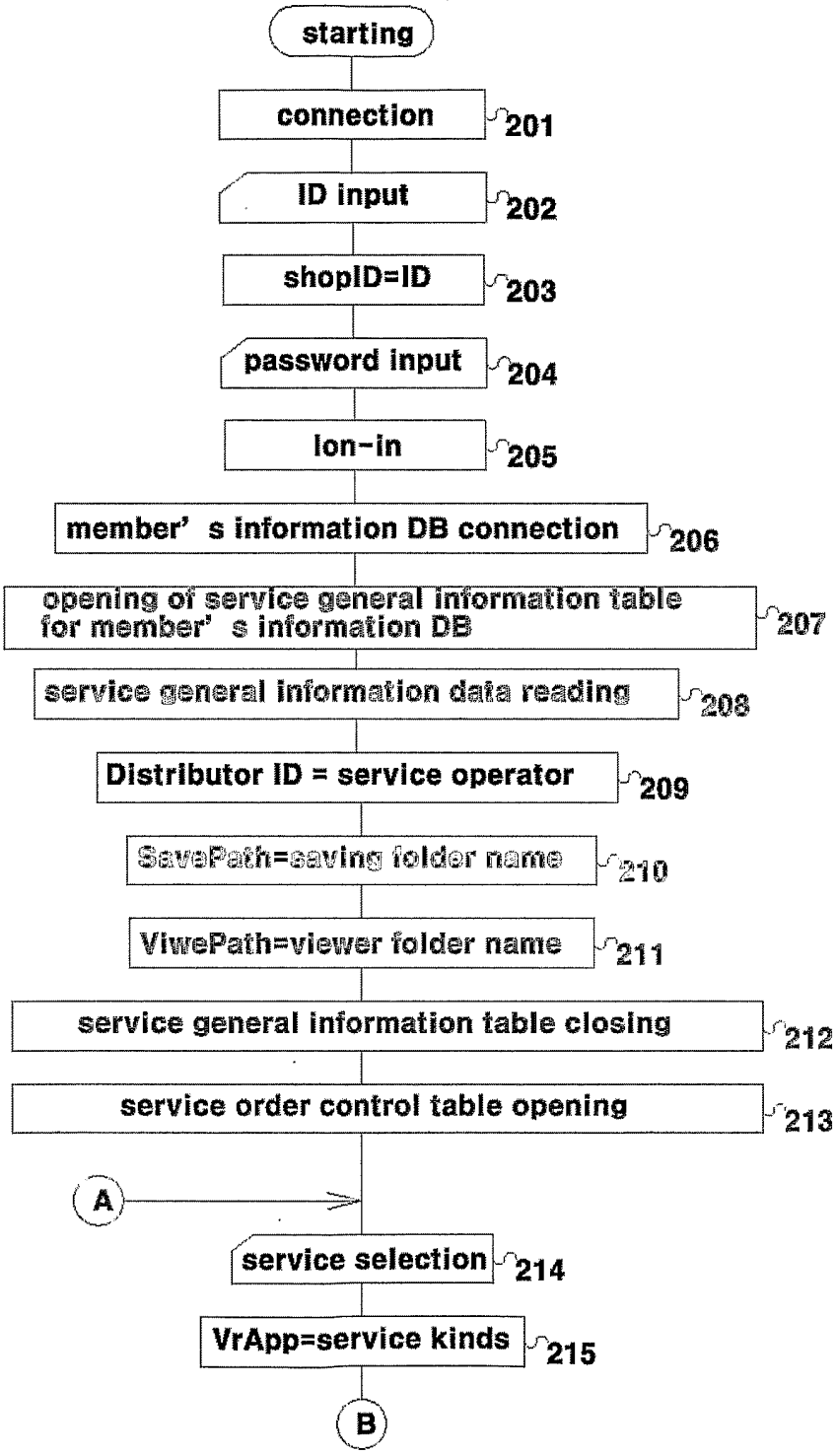

starting
connection
201
ID input
202
shopID=ID
203
password input
204
lon-in
205
member' s information DB connection
206
opening of service general information table for member' s information DB
207
service general information data reading
208
Distributor ID = service operator
209
SavePath=saving folder name
210
ViwePath=viewer folder name
211
service general information table closing
212
service order control table opening
213
A
service selection
214
VrApp=service kinds
215
B

FIG. 13

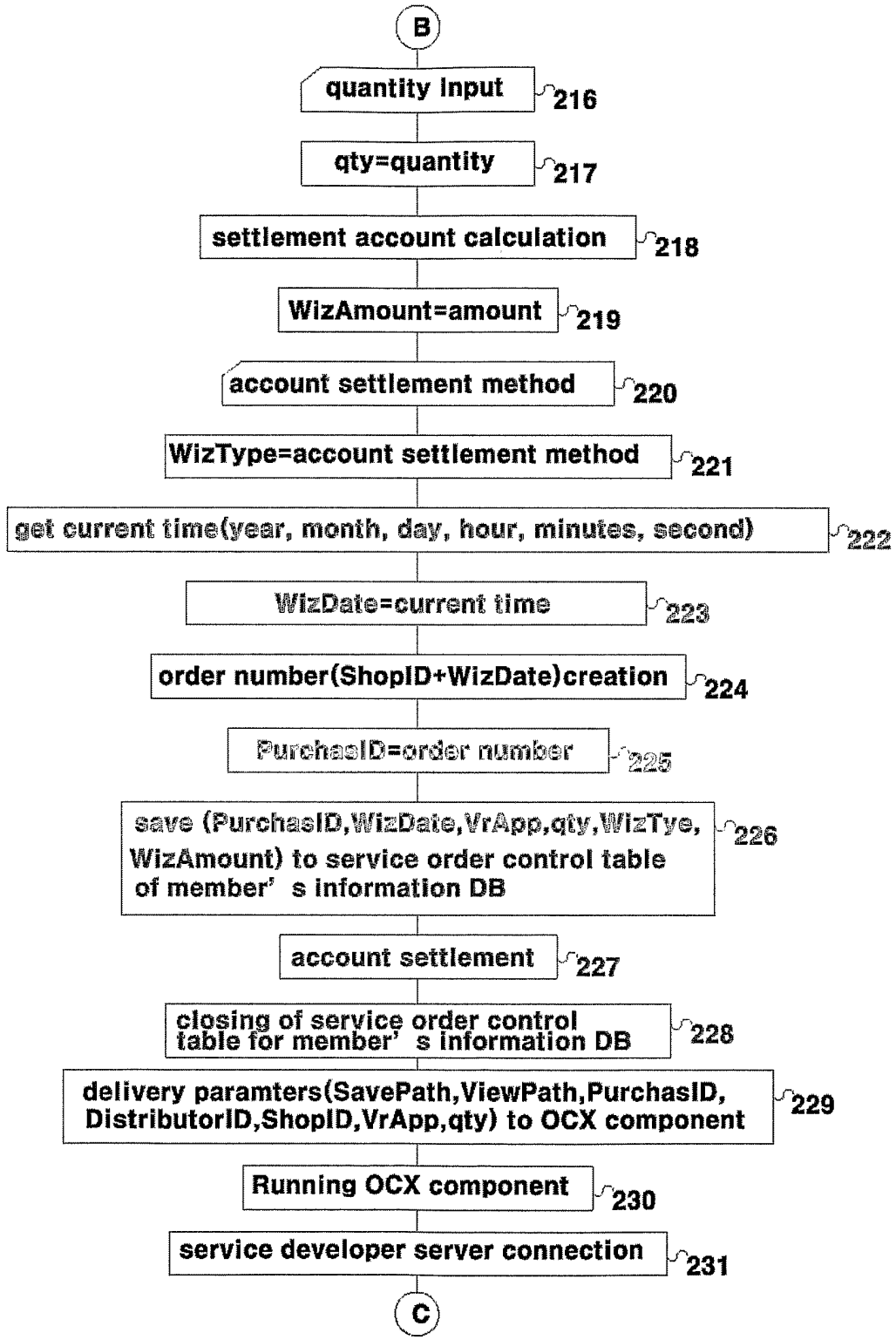

B
quantity input
216
qty=quantity
217
settlement account calculation
218
WizAmount=amount
219
account settlement method
220
WizType=account settlement method
221
get current time(year, month, day, hour, minutes, second)
222
WizDate=current time
223
order number(ShopID+WizDate)creation
224
PurchasID=order number
225
save (PurchasID,WizDate,VrApp,qty,WizTye, WizAmount) to service order control table of member' s information DB
226
account settlement
227
closing of service order control table for member' s information DB
228
delivery paramters(SavePath,ViewPath,PurchasID, DistributorID,ShopID,VrApp,qty) to OCX component
229
Running OCX component
230
service developer server connection
231
C

FIG. 14

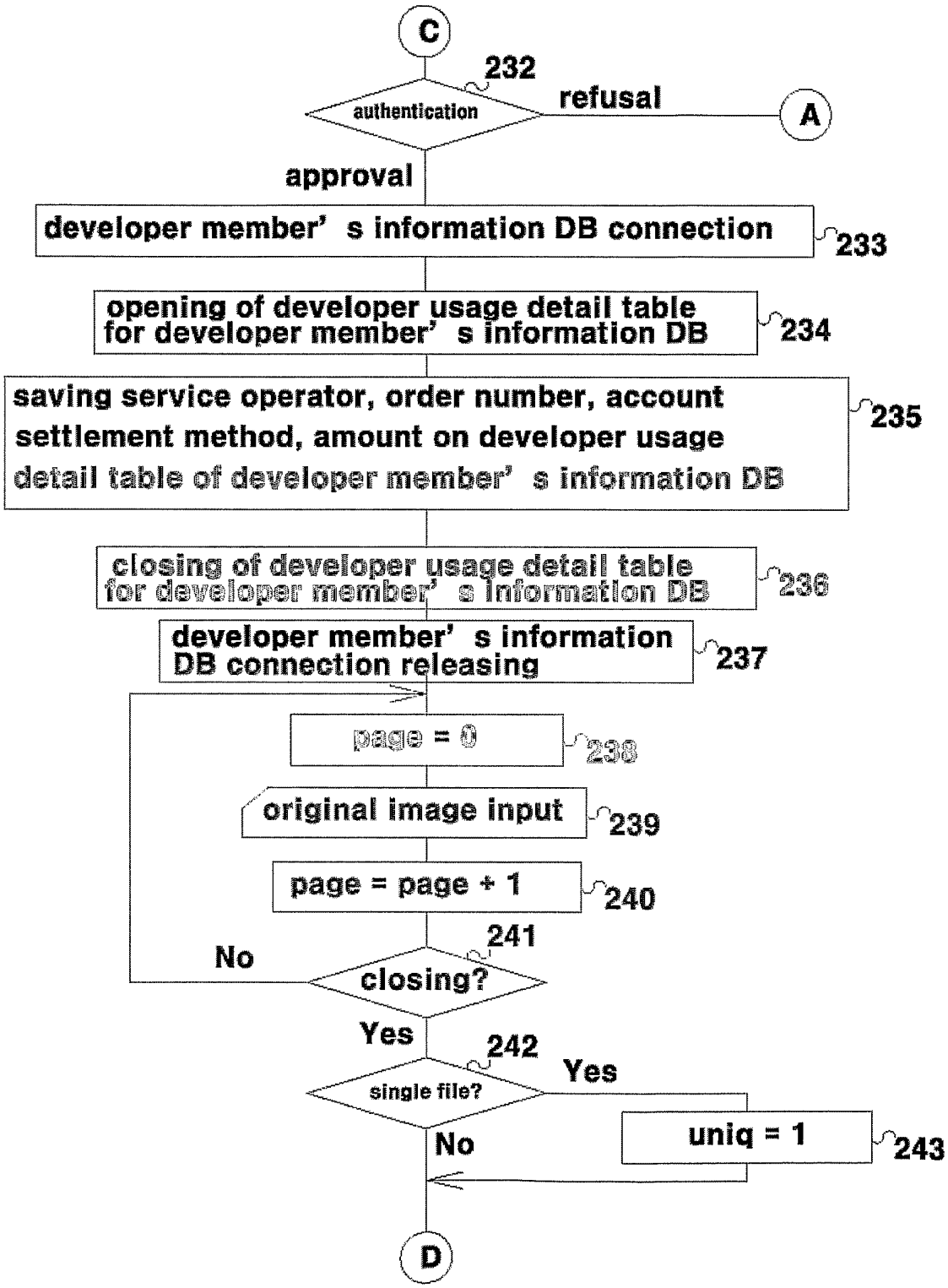

C
232
authentication
refusal
A
approval
developer member' s information DB connection
233
opening of developer usage detail table for developer member' s information DB
234
saving service operator, order number, account settlement method, amount on developer usage detail table of developer member' s information DB
235
closing of developer usage detail table for developer member' s information DB
236
developer member' s information DB connection releasing
237
page = 0
238
original image input
239
page = page + 1
240
241
No
closing?
Yes
242
single file?
Yes
uniq = 1
243
No
D

FIG. 15

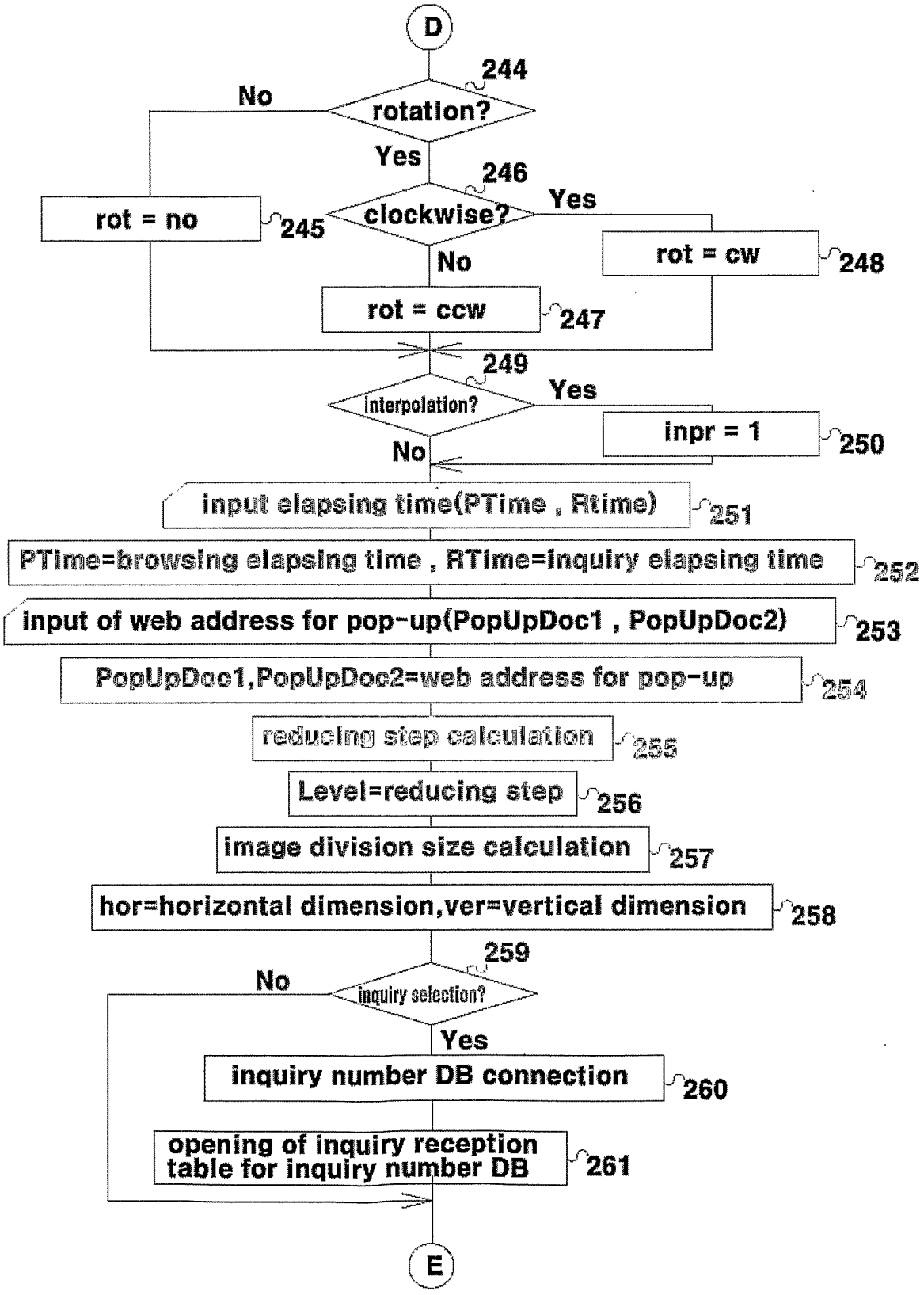

D
244
rotation?
No
Yes
246
clockwise?
Yes
rot = no
245
rot = cw
248
No
rot = ccw
247
249
interpolation?
Yes
inpr = 1
250
No
input elapsing time(PTime , Rtime)
251
PTime=browsing elapsing time , RTime=inquiry elapsing time
252
input of web address for pop-up(PopUpDoc1 , PopUpDoc2)
253
PopUpDoc1,PopUpDoc2=web address for pop-up
254
reducing step calculation
255
Level=reducing step
256
image division size calculation
257
hor=horizontal dimension,ver=vertical dimension
258
259
No
inquiry selection?
Yes
inquiry number DB connection
260
opening of inquiry reception table for inquiry number DB
261
E

FIG. 16

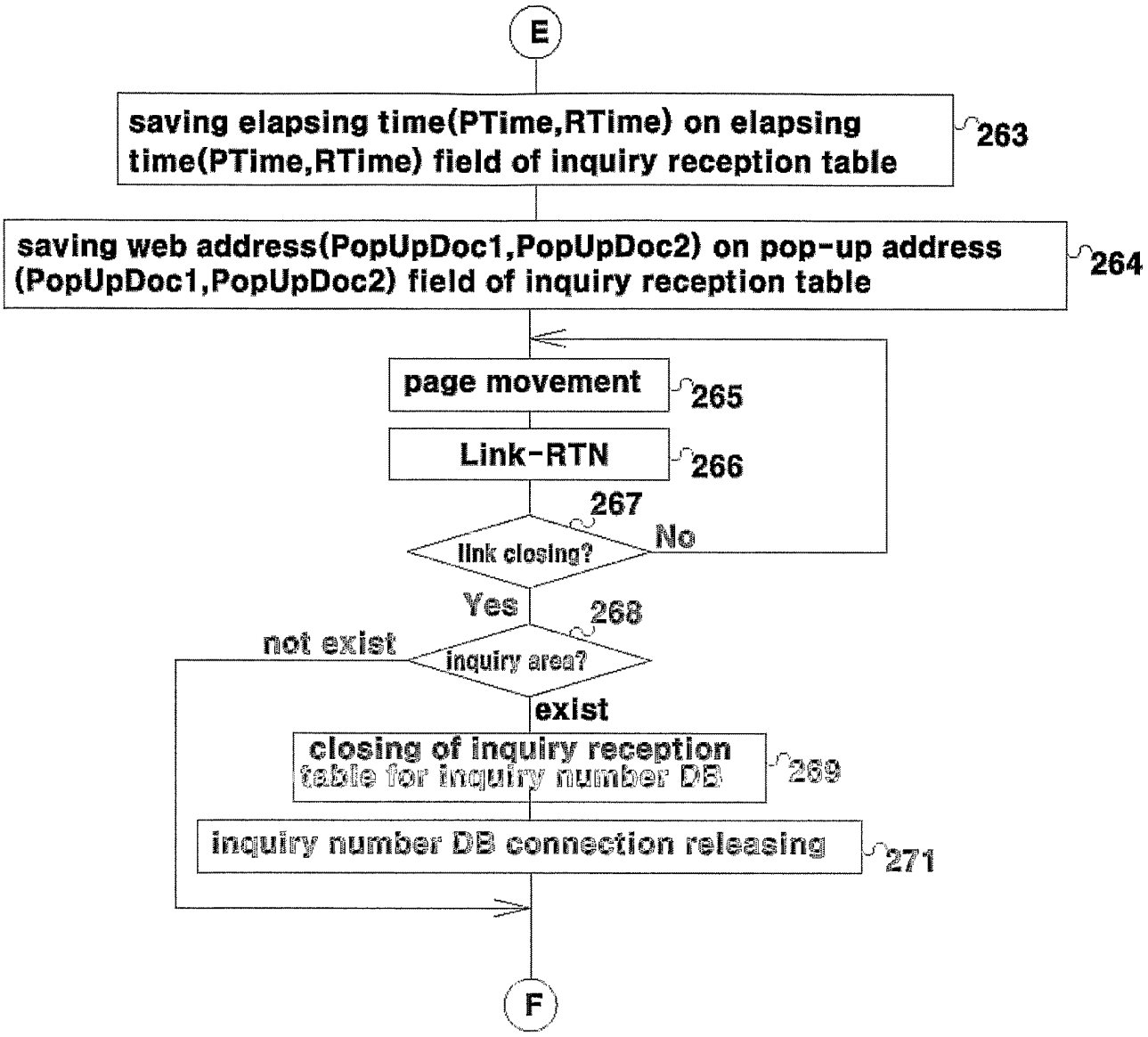

E
saving elapsing time(PTime,RTime) on elapsing time(PTime,RTime) field of inquiry reception table
263
saving web address(PopUpDoc1,PopUpDoc2) on pop-up address (PopUpDoc1,PopUpDoc2) field of inquiry reception table
264
page movement
265
Link-RTN
266
267
link closing?
No
Yes
268
not exist
inquiry area?
exist
closing of inquiry reception table for inquiry number DB
269
inquiry number DB connection releasing
271
F

FIG. 17

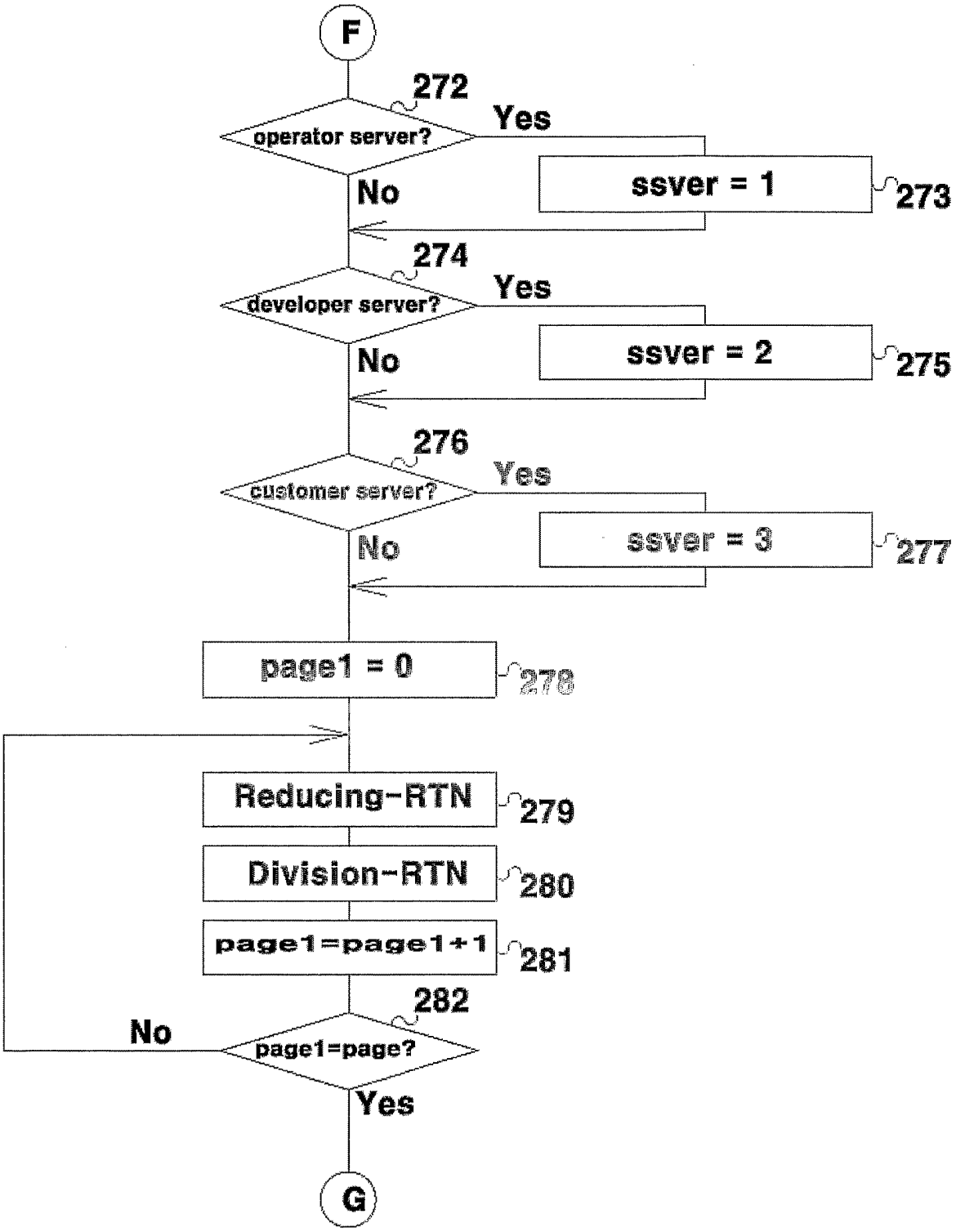

F
272
operator server?
Yes
No
ssver = 1
273
274
developer server?
Yes
No
ssver = 2
275
276
customer server?
Yes
No
ssver = 3
277
page1 = 0
278
Reducing-RTN
279
Division-RTN
280
page1=page1+1
281
282
No
page1=page?
Yes
G

FIG. 18

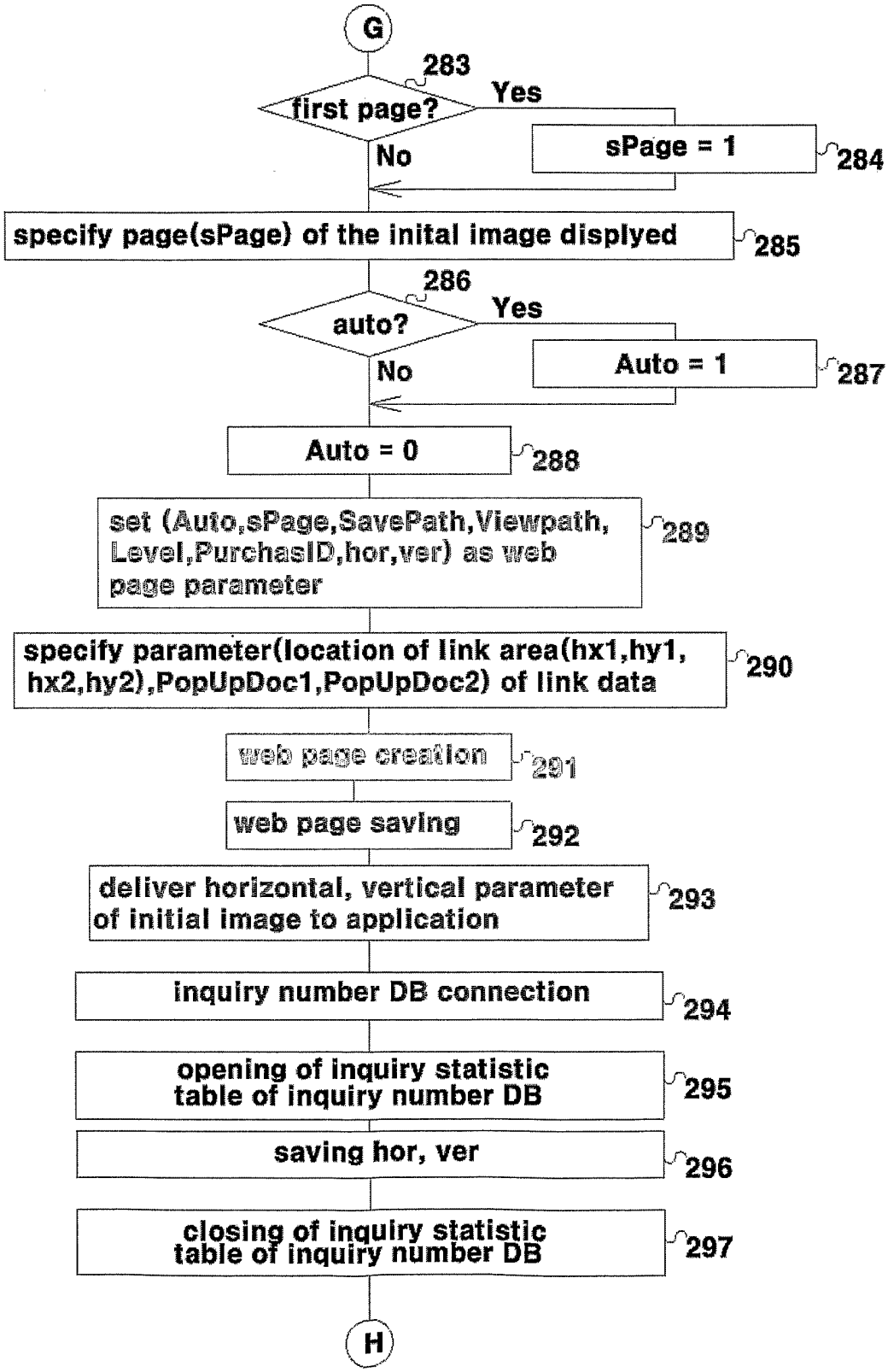

G
283
first page?
Yes
No
sPage = 1
284
specify page(sPage) of the inital image displyed
285
286
auto?
Yes
No
Auto = 1
287
Auto = 0
288
set (Auto,sPage,SavePath,Viewpath, Level,PurchasID,hor,ver) as web page parameter
289
specify parameter(location of link area(hx1,hy1, hx2,hy2),PopUpDoc1,PopUpDoc2) of link data
290
web page creation
291
web page saving
292
deliver horizontal, vertical parameter of initial image to application
293
inquiry number DB connection
294
opening of inquiry statistic table of inquiry number DB
295
saving hor, ver
296
closing of inquiry statistic table of inquiry number DB
297
H

FIG. 19

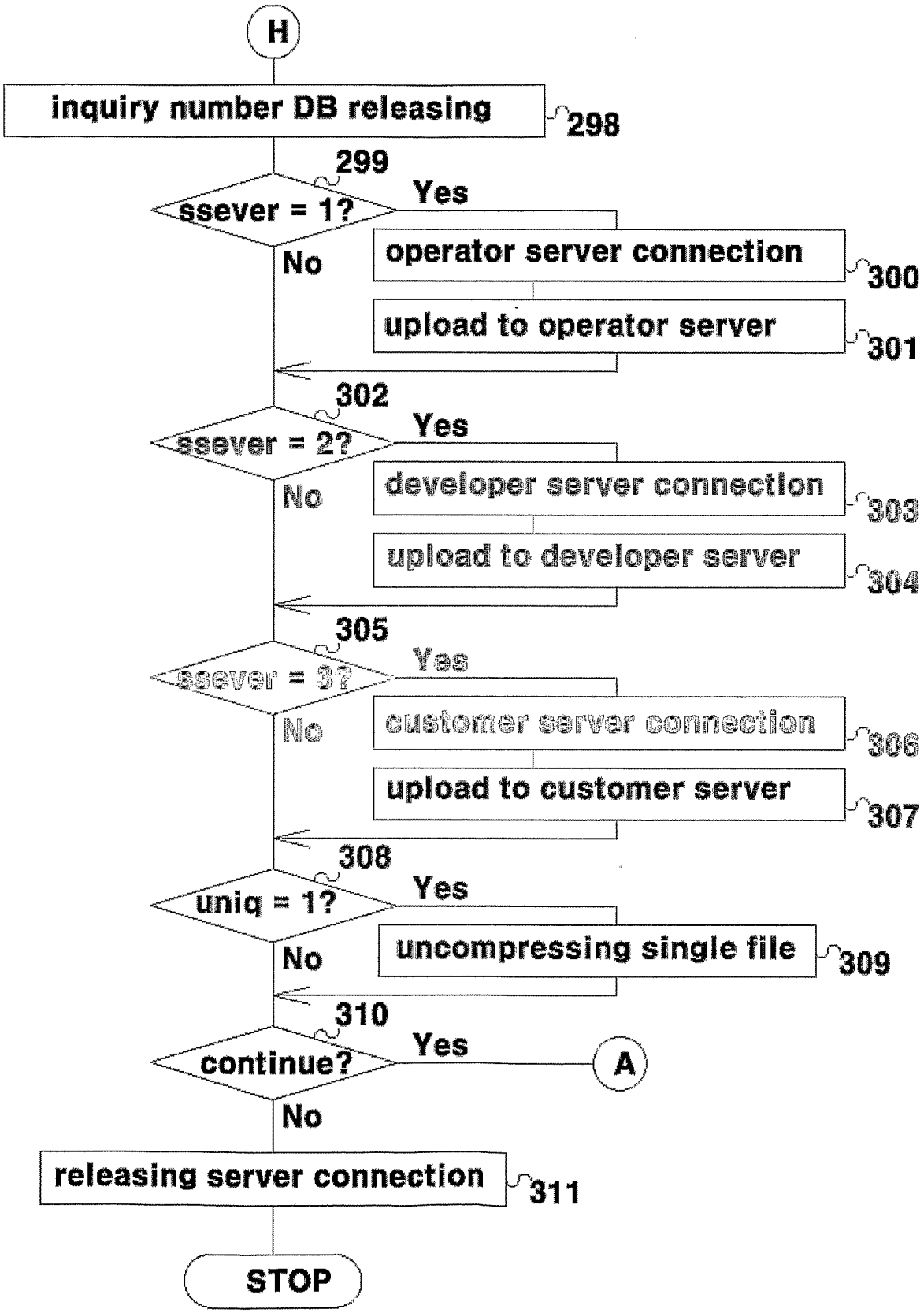

H
inquiry number DB releasing
298
299
ssever = 1?
Yes
No
operator server connection
300
upload to operator server
301
302
ssever = 2?
Yes
No
developer server connection
303
upload to developer server
304
305
ssever = 3?
Yes
No
customer server connection
306
upload to customer server
307
308
uniq = 1?
Yes
No
uncompressing single file
309
310
continue?
Yes
A
No
releasing server connection
311
STOP

FIG. 20

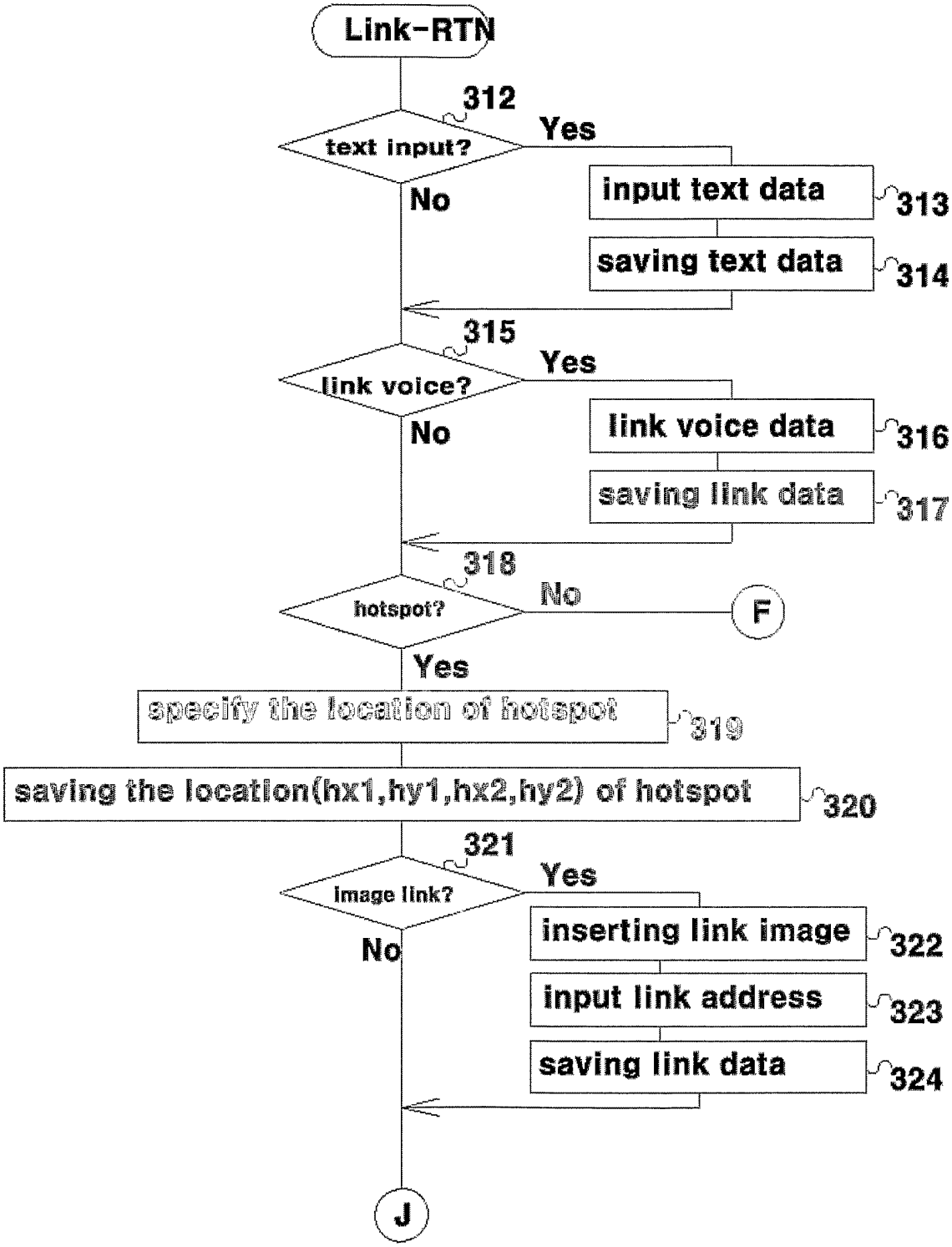

Link-RTN
312
text input?
Yes
No
input text data
313
saving text data
314
315
link voice?
Yes
No
link voice data
316
saving link data
317
318
hotspot?
No
F
Yes
specify the location of hotspot
319
saving the location(hx1,hy1,hx2,hy2) of hotspot
320
321
image link?
Yes
No
inserting link image
322
input link address
323
saving link data
324
J

FIG. 21

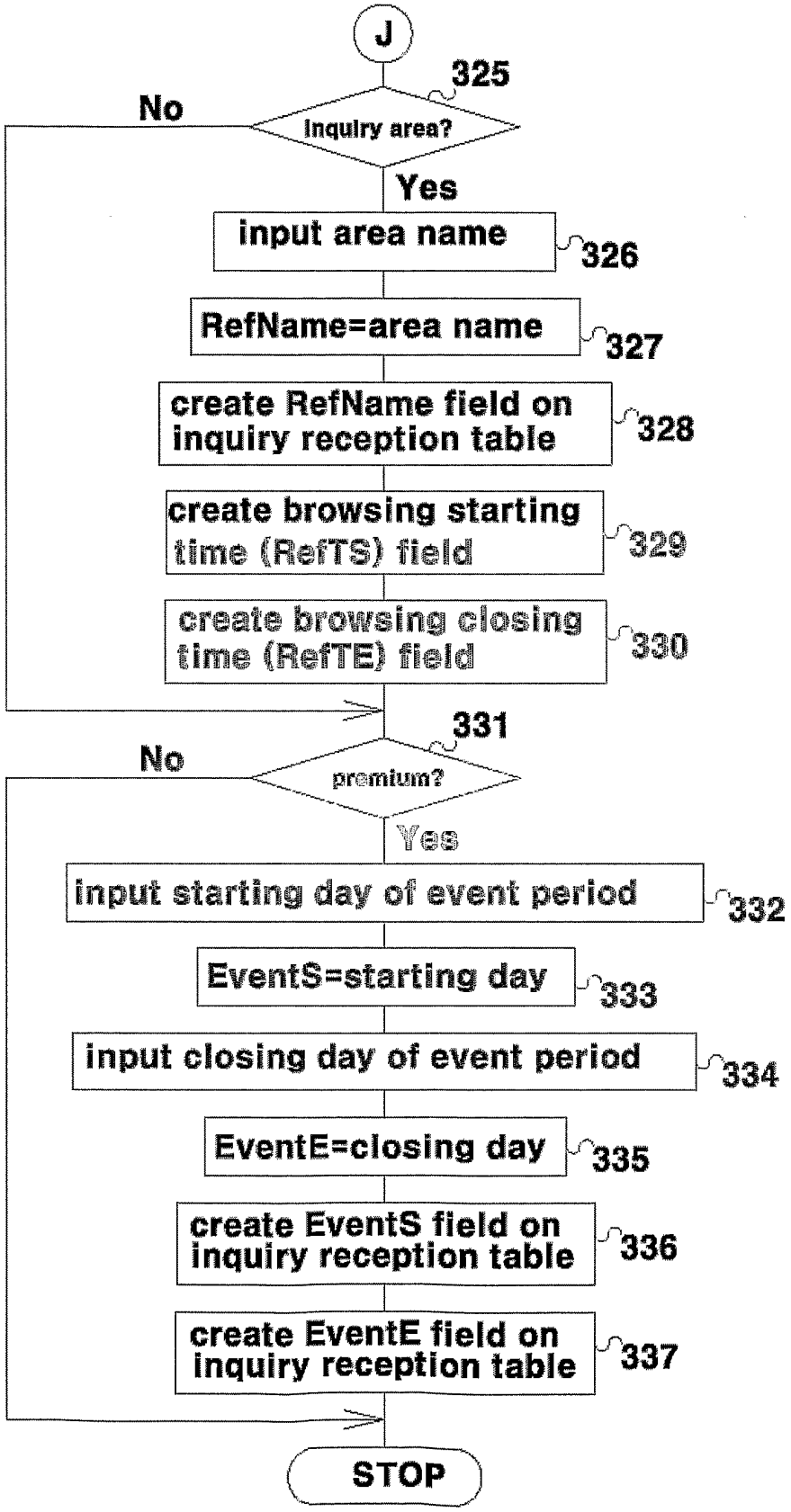

J
325
No
Inquiry area?
Yes
input area name
326
RefName=area name
327
create RefName field on inquiry reception table
328
create browsing starting time (RefTS) field
329
create browsing closing time (RefTE) field
330
331
No
premium?
Yes
input starting day of event period
332
EventS=starting day
333
input closing day of event period
334
EventE=closing day
335
create EventS field on inquiry reception table
336
create EventE field on inquiry reception table
337
STOP

FIG. 22

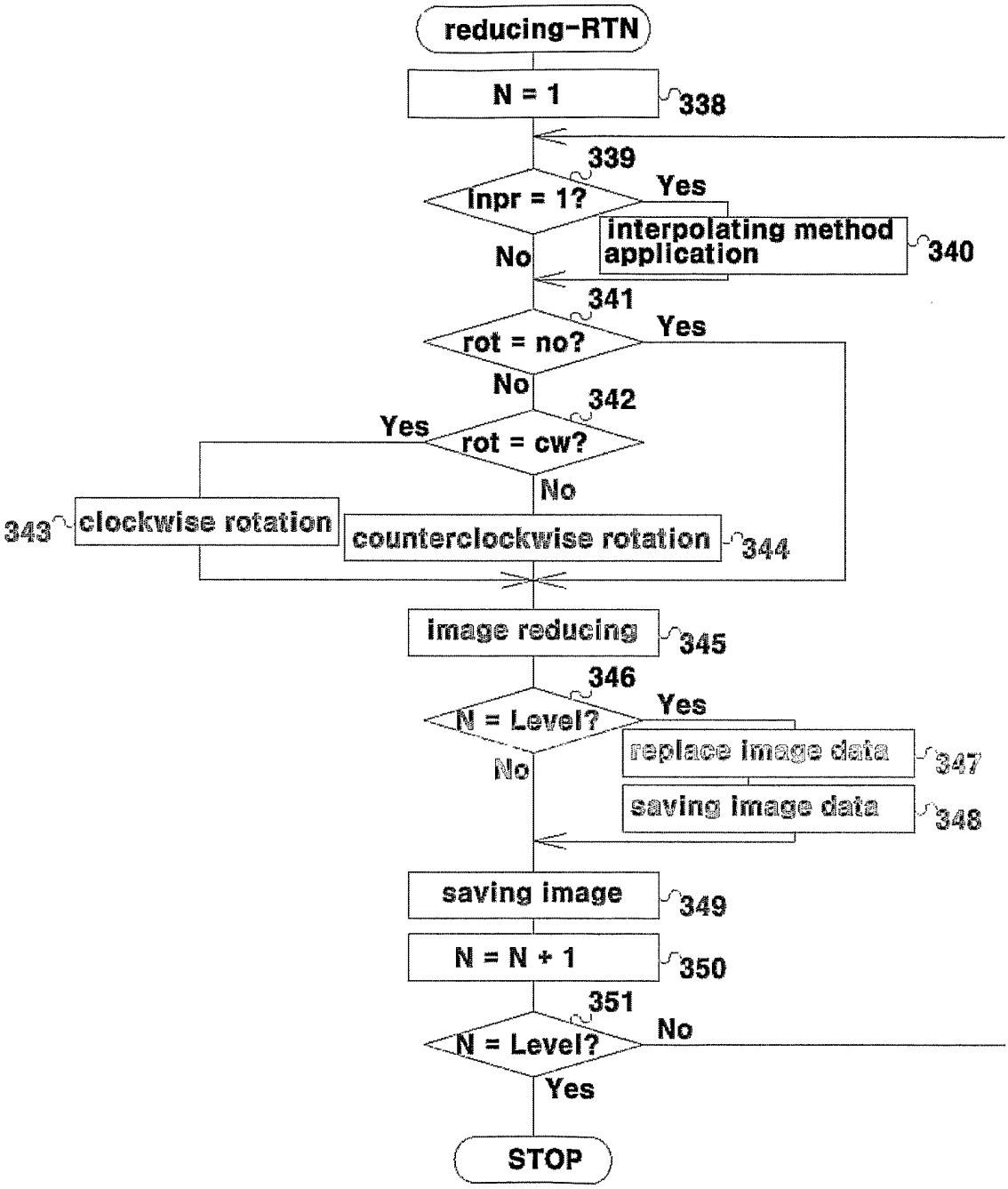

reducing-RTN
N = 1
338
339
inpr = 1?
Yes
interpolating method application
340
No
341
rot = no?
Yes
No
342
Yes
rot = cw?
No
343
clockwise rotation
counterclockwise rotation
344
image reducing
345
346
N = Level?
Yes
replace image data
347
No
saving image data
348
saving image
349
N = N + 1
350
351
N = Level?
No
Yes
STOP

FIG. 23

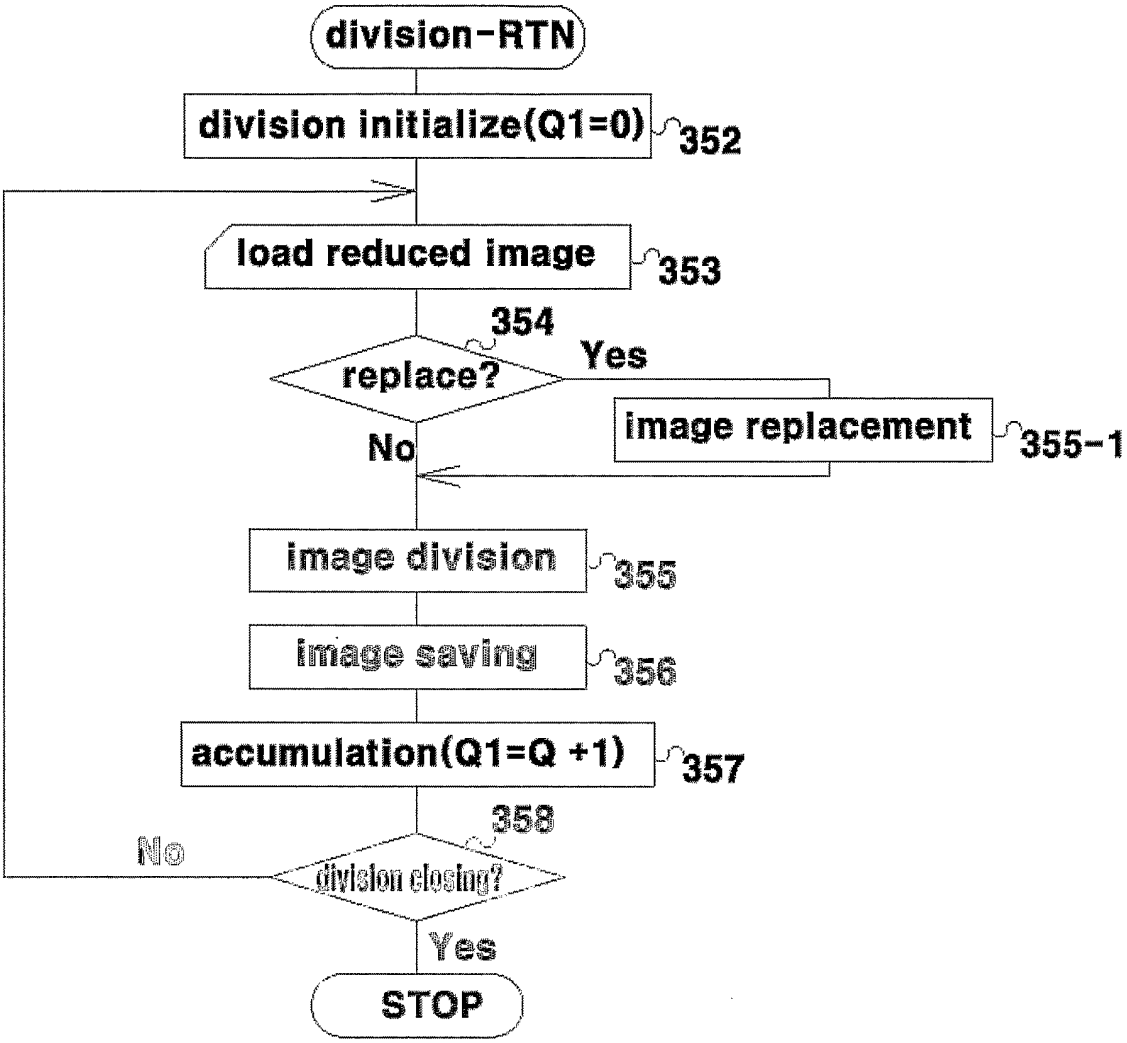

division-RTN
division initialize(Q1=0)
352
load reduced image
353
354
replace?
Yes
image replacement
355-1
No
image division
355
image saving
356
accumulation(Q1=Q +1)
357
358
No
division closing?
Yes
STOP

FIG. 24

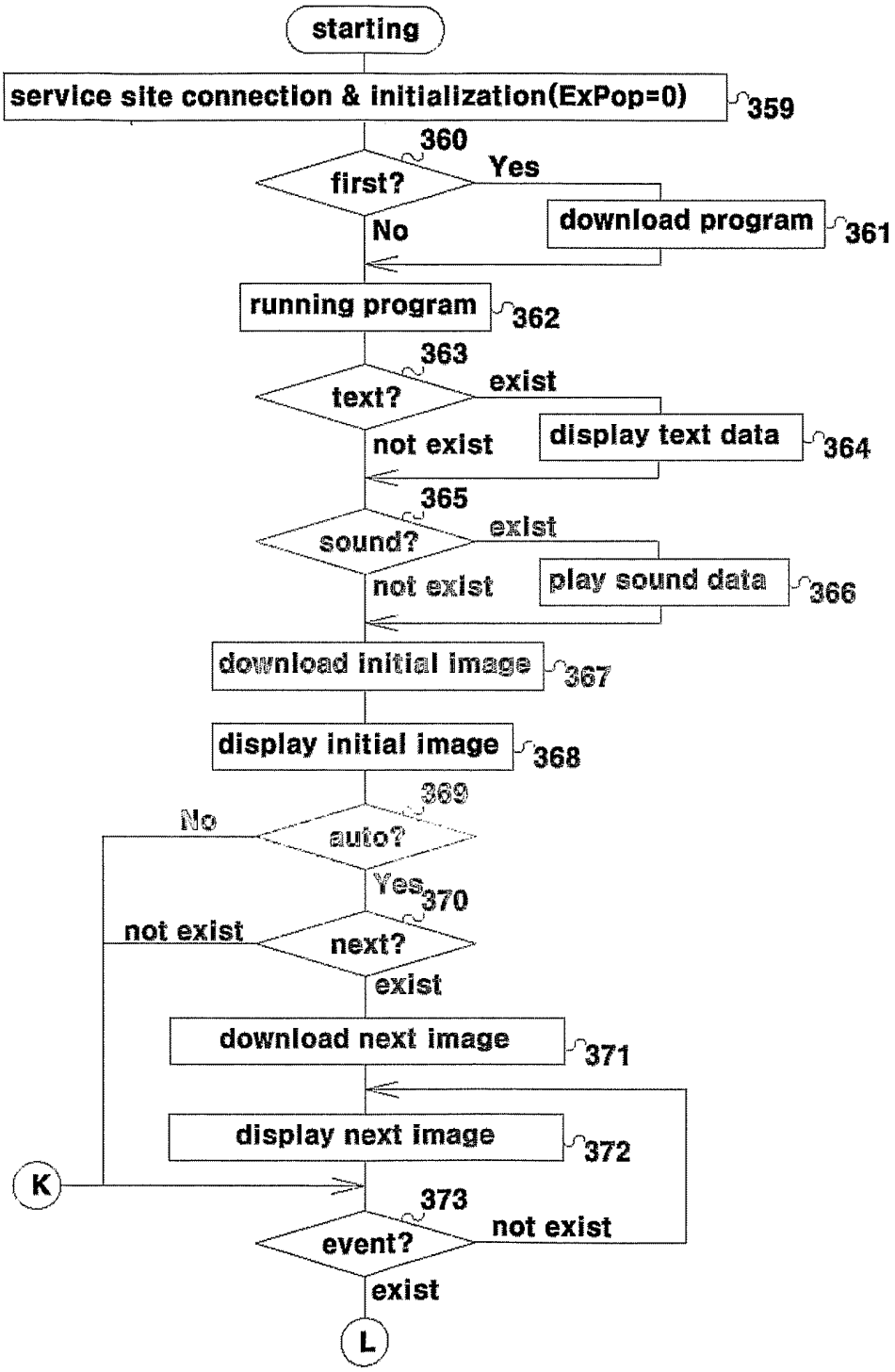

starting
service site connection & initialization(ExPop=0)
359
360
first?
Yes
download program
361
No
running program
362
363
text?
exist
display text data
364
not exist
365
sound?
exist
play sound data
366
not exist
download initial image
367
display initial image
368
369
auto?
No
Yes
370
next?
not exist
exist
download next image
371
display next image
372
K
373
event?
not exist
exist
L

FIG. 25

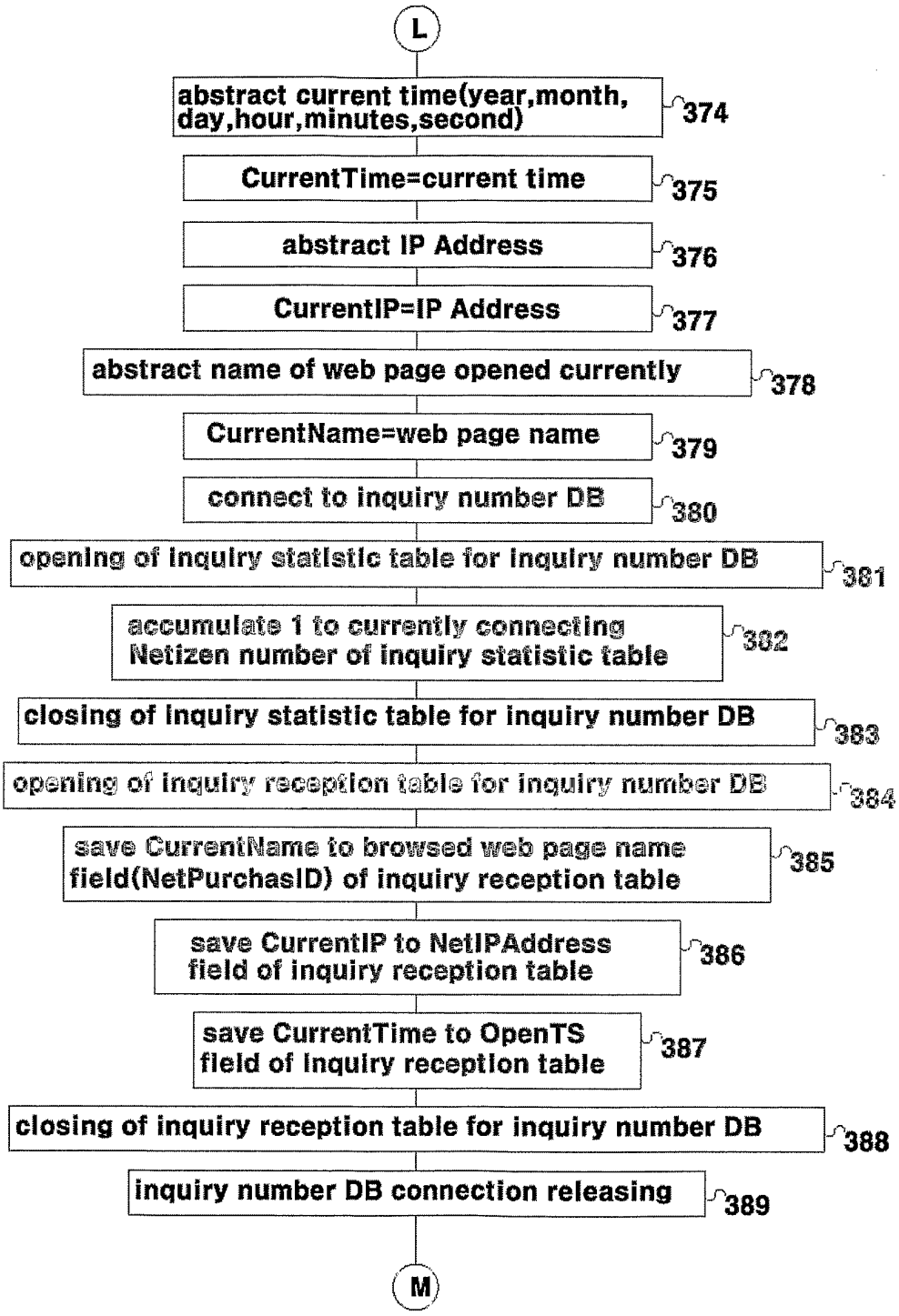

L
abstract current time(year,month, day,hour,minutes,second)
374
CurrentTime=current time
375
abstract IP Address
376
CurrentIP=IP Address
377
abstract name of web page opened currently
378
CurrentName=web page name
379
connect to inquiry number DB
380
opening of inquiry statistic table for inquiry number DB
381
accumulate 1 to currently connecting Netizen number of inquiry statistic table
382
closing of inquiry statistic table for inquiry number DB
383
opening of inquiry reception table for inquiry number DB
384
save CurrentName to browsed web page name field(NetPurchasID) of inquiry reception table
385
save CurrentIP to NetIPAddress field of inquiry reception table
386
save CurrentTime to OpenTS field of inquiry reception table
387
closing of inquiry reception table for inquiry number DB
388
inquiry number DB connection releasing
389
M

FIG. 26

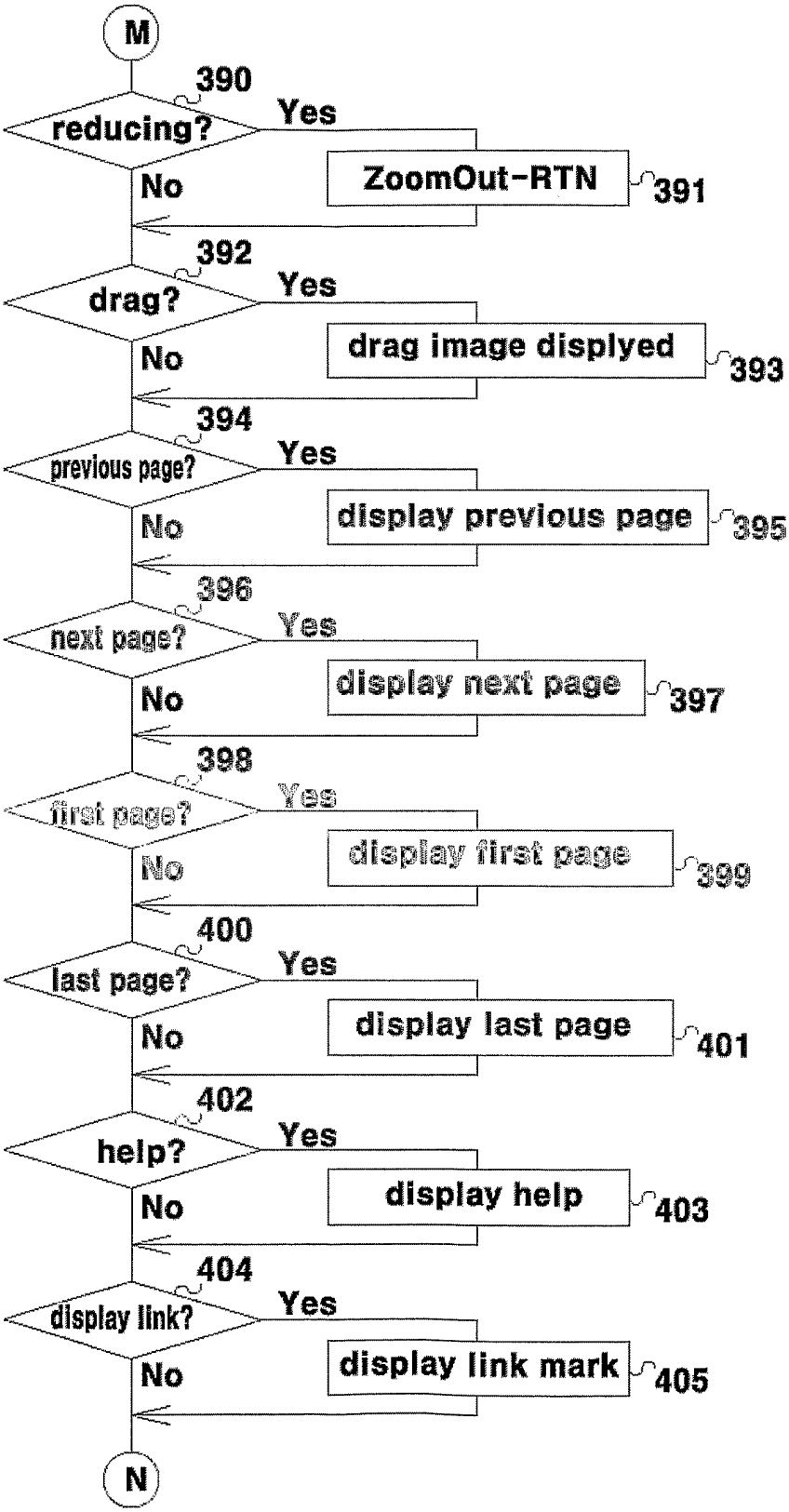

M
390
reducing?
Yes
ZoomOut-RTN
391
No
392
drag?
Yes
drag image displyed
393
No
394
previous page?
Yes
display previous page
395
No
396
next page?
Yes
display next page
397
No
398
first page?
Yes
display first page
399
No
400
last page?
Yes
display last page
401
No
402
help?
Yes
display help
403
No
404
display link?
Yes
display link mark
405
No
N

FIG. 27

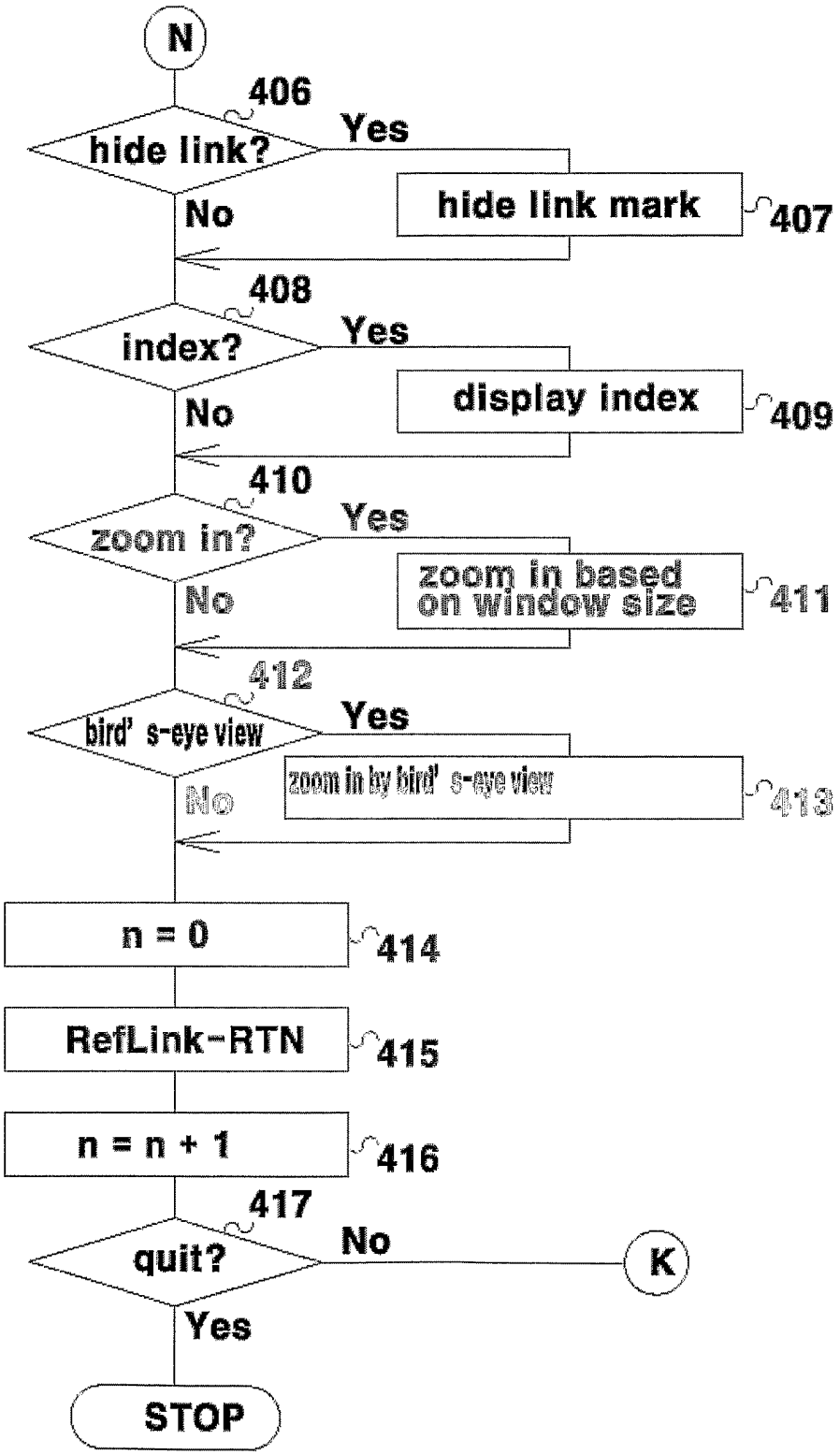

N
406
hide link?
Yes
hide link mark
407
No
408
index?
Yes
display index
409
No
410
zoom in?
Yes
zoom in based on window size
411
No
412
bird' s-eye view
Yes
zoom in by bird' s-eye view
413
No
n = 0
414
RefLink-RTN
415
n = n + 1
416
417
quit?
No
K
Yes
STOP

FIG. 28

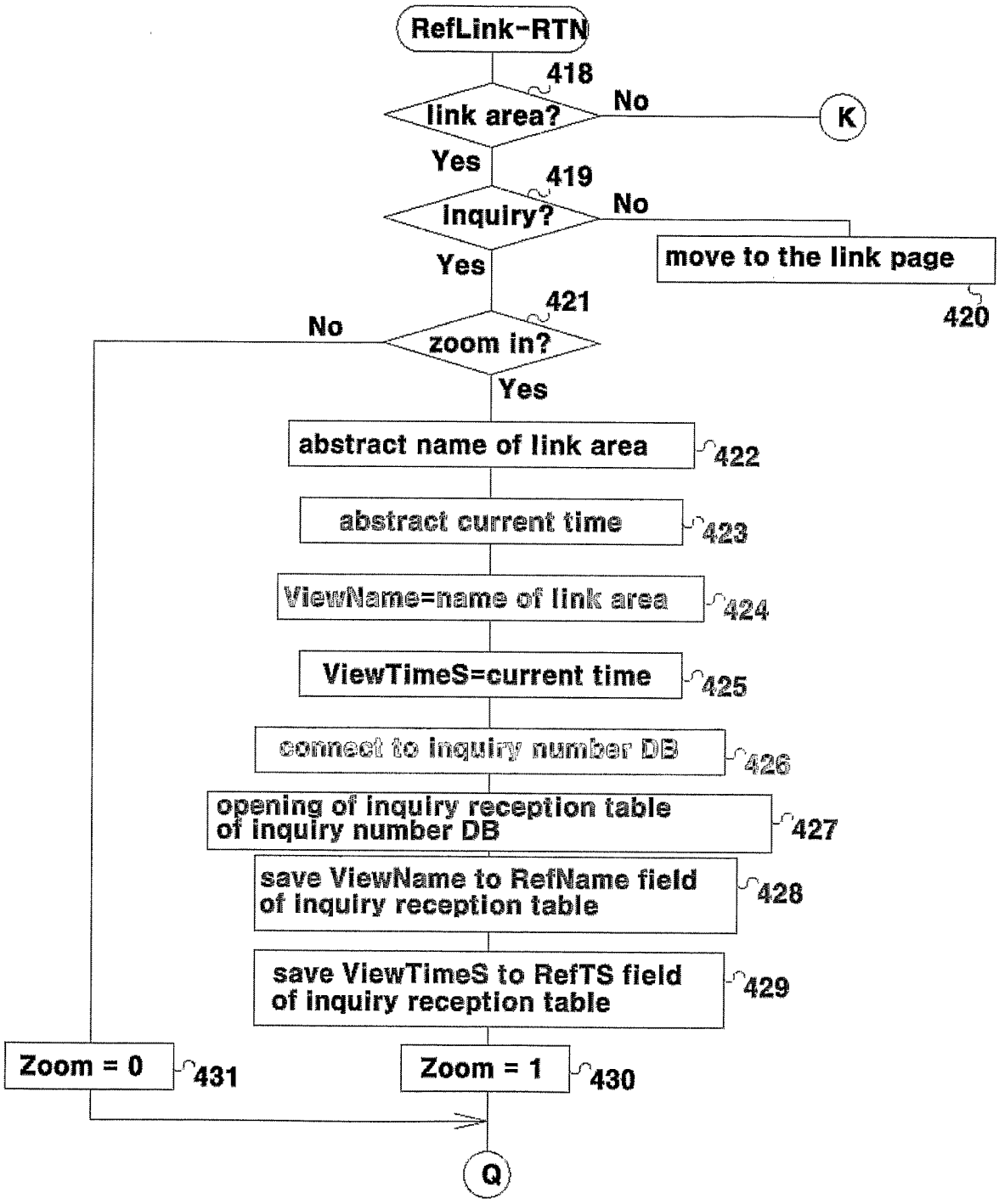

RefLink-RTN
418
link area?
No
K
Yes
419
inquiry?
No
move to the link page
420
Yes
421
No
zoom in?
Yes
abstract name of link area
422
abstract current time
423
ViewName=name of link area
424
ViewTimeS=current time
425
connect to inquiry number DB
426
opening of inquiry reception table of inquiry number DB
427
save ViewName to RefName field of inquiry reception table
428
save ViewTimeS to RefTS field of inquiry reception table
429
Zoom = 0
431
Zoom = 1
430
Q

FIG. 29

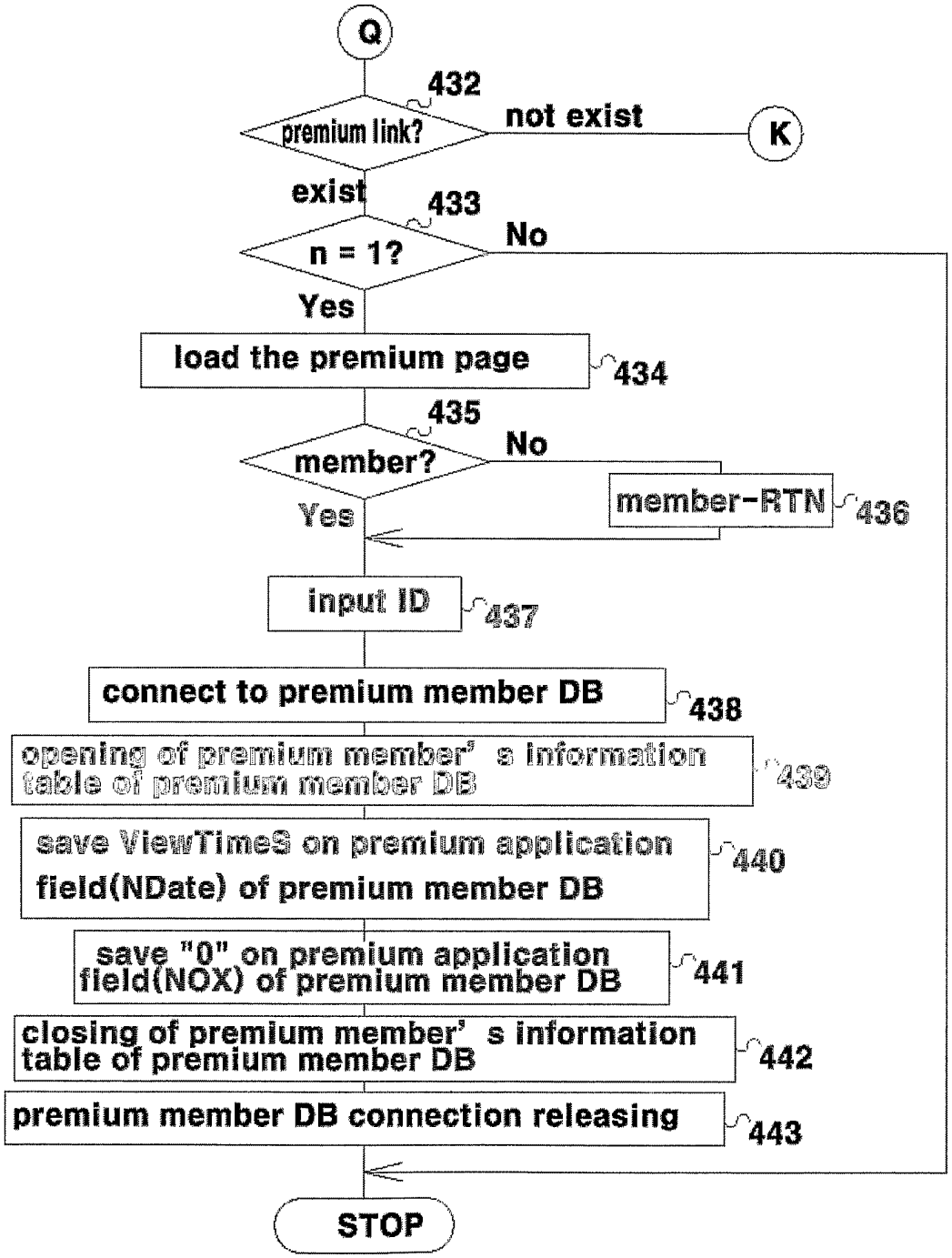

Q
432
premium link?
not exist
K
exist
433
n = 1?
No
Yes
load the premium page
434
435
member?
No
member-RTN
436
Yes
input ID
437
connect to premium member DB
438
opening of premium member' s information table of premium member DB
439
save ViewTimeS on premium application field(NDate) of premium member DB
440
save "0" on premium application field(NOX) of premium member DB
441
closing of premium member' s information table of premium member DB
442
premium member DB connection releasing
443
STOP

FIG. 30

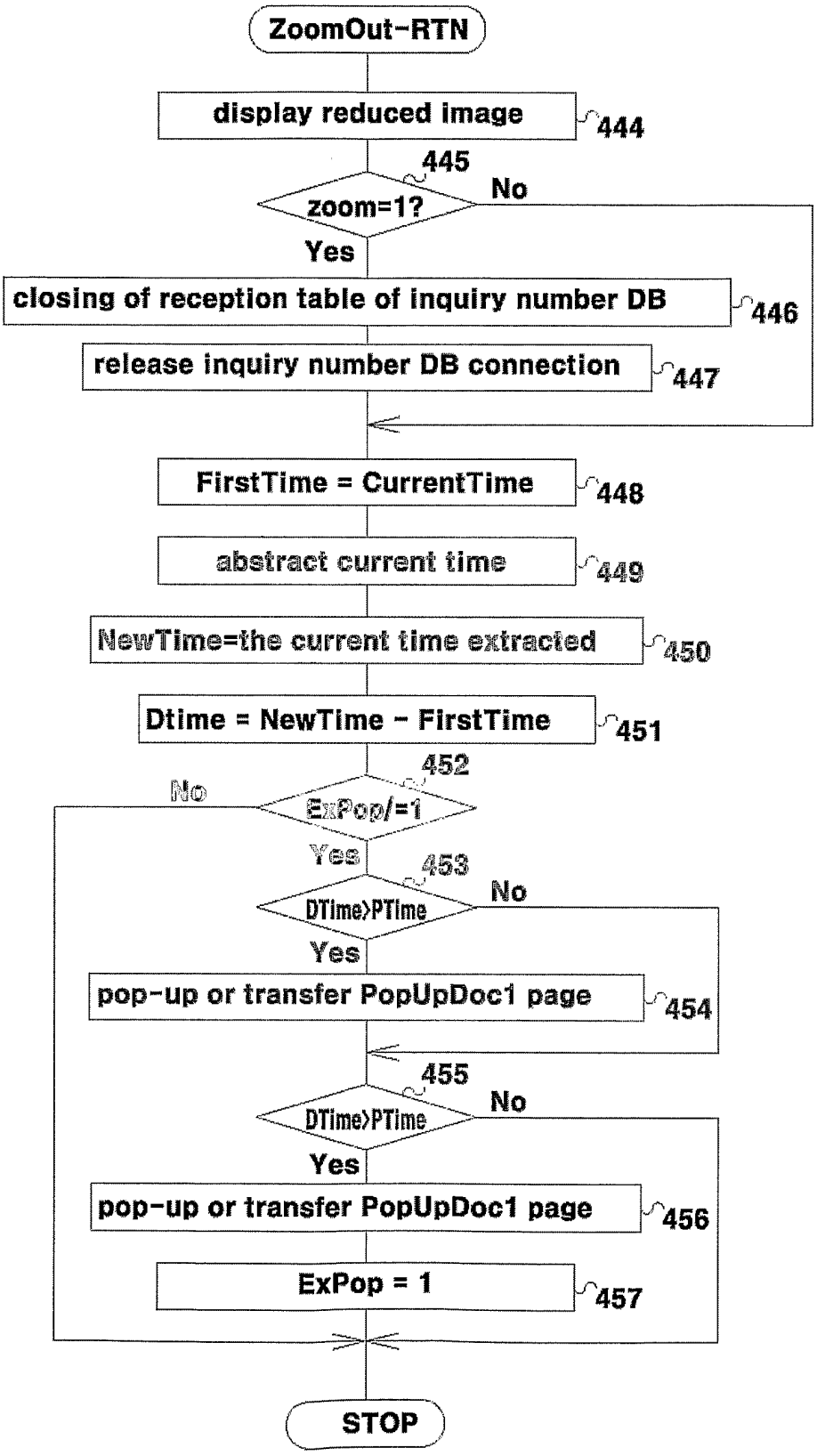

ZoomOut-RTN
display reduced image
444
445
zoom=1?
No
Yes
closing of reception table of inquiry number DB
446
release inquiry number DB connection
447
FirstTime = CurrentTime
448
abstract current time
449
NewTime=the current time extracted
450
Dtime = NewTime - FirstTime
451
452
No
ExPop/=1
Yes
453
DTime>PTime
No
Yes
pop-up or transfer PopUpDoc1 page
454
455
DTime>PTime
No
Yes
pop-up or transfer PopUpDoc1 page
456
ExPop = 1
457
STOP

FIG. 31



FIG. 32

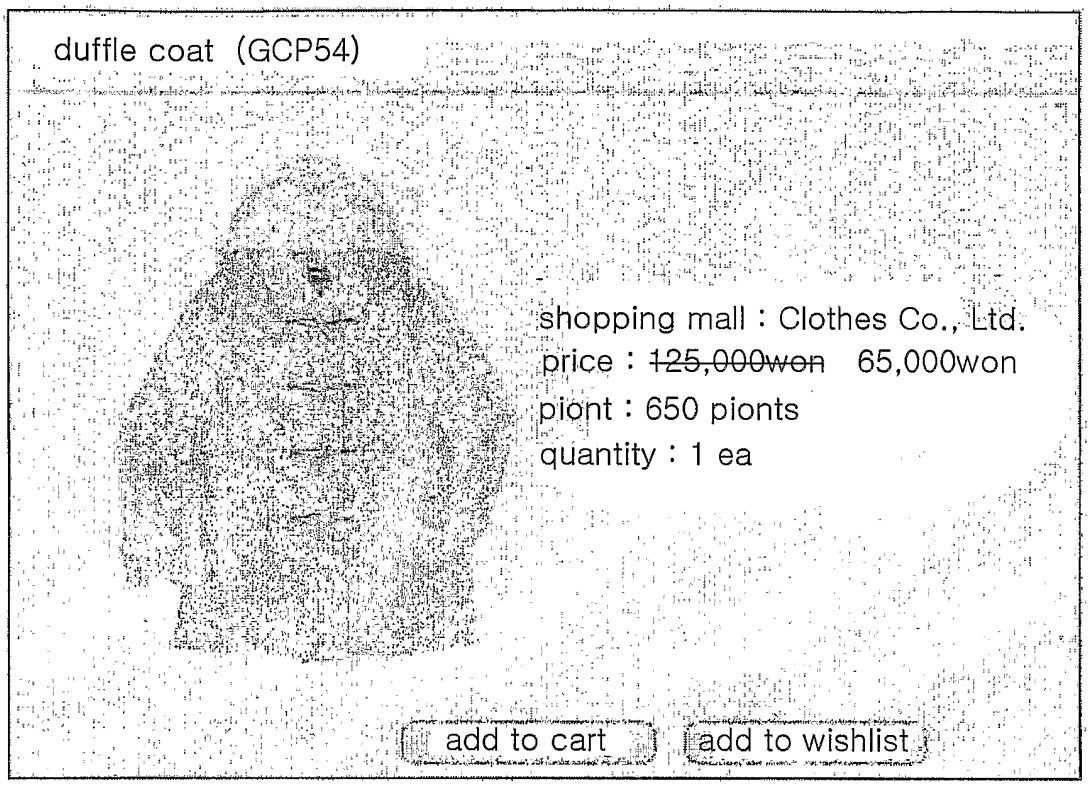
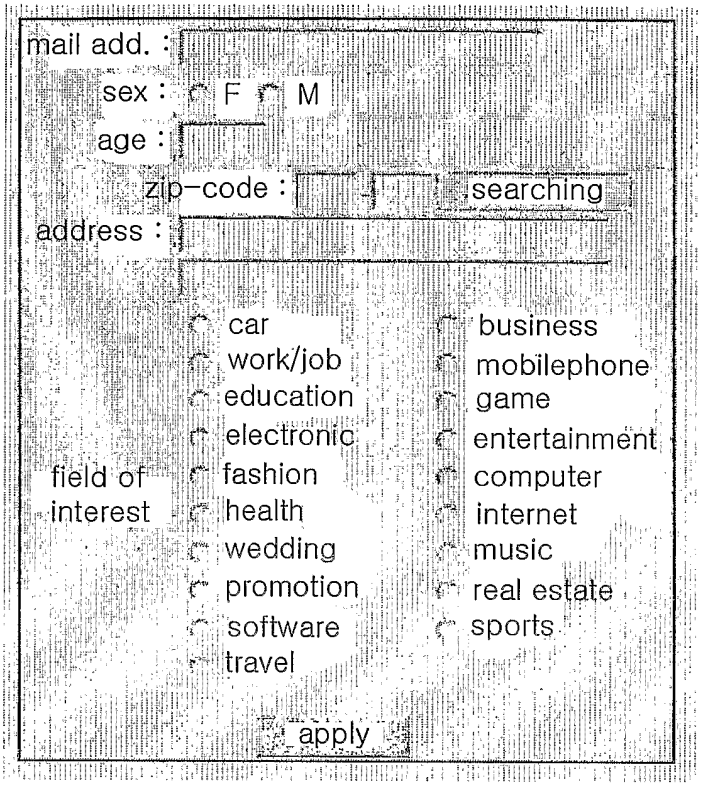

duffle coat (GCP54)
shopping mall : Clothes Co., Ltd.
price : 125,000won 65,000won
piont : 650 pionts
quantity : 1 ea
add to cart
add to wishlist

FIG. 33


mail add. :
sex : F M
age :
zip-code : searching
address :
field of interest
car
work/job
education
electronic
fashion
health
wedding
promotion
software
travel
business
mobilephone
game
entertainment
computer
internet
music
real estate
sports
apply

INTERNATIONAL SEARCH REPORT

ternational application No.
PCT/KR2004/000333

A. CLASSIFICATION OF SUBJECT MATTER

IPC7 G06F 17/00

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)

KR, JP : IPC as above

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

IPC7 G06F 15/02, G06F17/00

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	KR 10-2001-44248 A (DAUMINTERNETSAESANG CO. LTD.) 05. JUNE. 2001 See the whole document	1-17
A	KR 10-2001- 44255 A (DAUMINTERNETSAESANG CO. LTD.) 05. JUNE. 2001 See the whole document	1-17
A	WO 2002/15043 A (E MEDIA CO.LTD) 21.FEB.2002 See the whole document	1-17

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

☐ See patent family annex.

* Special categories of cited documents:

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"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

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"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
14 APRIL 2004 (14.04.2004)	16 APRIL 2004 (16.04.2004)

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