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DESCRIPTION

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IMAGE DELIVERING SYSTEM AND METHOD THEREOF5 **FIELD OF THE INVENTION**

The present invention relates to a system for an image delivery and a method thereof, and especially, to a system in which a plurality of images are prepared in a server, an image is down-loaded in a mobile phone from the server, and the down-loaded image is displayed on the mobile phone, and a method thereof.

10**BACKGROUND OF THE INVENTION**

In recent years, in mass media such as a newspaper and a magazine, a mobile phone is given attention. A recent mobile phone has a function like a computer, in which not only a simple call function like in a conventional set-up type phone, but also a function capable of being connected to a network such as an internet and transmitting and receiving a data are provided.

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On the other hand, people have different tastes, and also on a waiting screen, a sort of a mobile phone in which a plurality of waiting screens are prepared in consideration of a user favorite is provided.

25 However, in the mobile phone, a storage capacity is

restricted, and the number of images to be held is also restricted. Accordingly, there is a task that images in accordance with tastes of a user are not necessarily prepared.

5 Further, for an image such as a character and so forth that are used on a waiting screen and so forth, there is a case in which a so called license fee under copyright is charged for the use thereof. In that case, a company that uses an image such as a character and so forth on a
10 waiting screen in a mobile information processing terminal such as a mobile phone and so forth has to pay a copyright fee for the character to a copyright holder of the character that is used.

 On the other hand, users have different tastes, and
15 although, out of the users, there is one who does not use an image preliminarily prepared in a mobile phone and so forth, even in this case, a sales company of the mobile phone has to bear a copyright fee for a character, and the copyright fee is often wasted.

20 A result, this causes an increase in a cost of the mobile phone.

 Accordingly, service for delivering an image that can be used on a waiting screen and so forth is proposed.

 However, this service is only for simply delivering an
25 image, and the delivered image can be delivered to other

mobile phone again and can be processed, and potential of
copyright infringement occurs.

SUMMARY OF THE INVENTION

5 The objective of the present invention is to solve the
above-described tasks.

Also, the objective of the present invention is to
provide an image delivering system for promoting
protection of a copyright and capable of delivering an
10 image in accordance with a taste of a user, and a method
thereof.

Moreover, the objective is to provide an image
delivering system capable of providing conventional pull
type service with push type image delivery service, and a
15 method thereof.

The above-described objectives of the present invention
is accomplished by an image delivering system having a
mobile communication network, a plurality of mobile phones
connected to the above-described mobile communication
20 network, a first server connected to the above-described
mobile phones via the above-described mobile communication
network, a network, and a second server connected to the
above-described first server via the above-described
network,

25 characterized in that the above-described mobile phones

have

display means for displaying an image, storage means
having a region to which access control is applied, member
registration demand means for transmitting a member
5 registration demand of image delivery service, image
delivery demand means for transmitting a demand of an
image delivery, image selecting means for transmitting
image selection information for selecting a desired image
data out of a plurality of image data that are held in the
10 above-described second server, and for down-loading the
desired image data, hold means for holding the above-
described down-loaded image data in the region of the
above-described storage means, to which access control is
applied, and image controlling means for displaying the
15 above-described down-loaded image on the above-described
display means,

the above-described first server has
a user identifier table in which intrinsic identifiers
of the above-described mobile phones, and user identifiers
20 that have a relationship in pairs with these intrinsic
identifiers are described in association with each other,
and means for retrieving the user identifiers
corresponding to the intrinsic identifiers of the above-
described mobile phones from the user identifier table,
25 converting the intrinsic identifiers into user identifiers,

and transmitting a demand from the above-described mobile phones to the second server, and

the above-described second server has

storage means in which a image data to be delivered is
5 held, a member list table in which user identifiers of
members of image delivery service are described, member
registration means for, when receiving a member
registration demand from the above-described first server,
determining whether a user identifier that is set to this
10 member registration demand is described in the above-
described member list table, and for, if it is not
described, describing the user identifier in the above-
described member list table, image list transmitting means
for, when receiving the above-described image delivery
15 demand, determining whether a user identifier that is set
to this image delivery demand is described in the above-
described member list table, and for, if it is described,
transmitting a list of a deliverable image, and image
delivering means for reading out an image data indicated
20 in the image selection information from the above-
described storage means, and for transmitting it to the
above-described mobile phones.

In accordance with the present invention, since an image
data to be delivered is held in storage means to which
25 access control is applied, in other words, since a user

freely reads out an image data to be delivered, and the
read-out image is held in storage means in which it cannot
be delivered to others again or cannot be processed,
protection of a copyright of the delivered image can be
5 promoted.

In addition, it is preferable that the image to be
delivered is updated every day.

Also, if the above-described mobile phones have means
for transmitting information on sorts of their own phones,
10 and further, the above-described second server has storage
means in which an image data for every sort of the mobile
phones is held, and image delivering means for reading out
an image data corresponding to information on the sorts of
the above-described mobile phones from the above-described
15 storage means, and transmitting it to the above-described
mobile phones via the above-described first server,
inconvenience of a display, which occurs due to a
difference of the sorts of the mobile phones, can be
avoided.

20 Also, in case that the above-described first server has
a table of information on sorts of the phones, in which
the intrinsic identifiers of the mobile phones and
information on sorts of the above-described mobile phones
are described in association with each other, and means
25 for, in response to a demand from the mobile phones,

retrieving the information on the sorts of the above-described mobile phones from the above-described table of information on the sorts of the phones, based on the intrinsic identifiers added to the above-described demand, and for adding this information on the sorts of the phones to the above-described demand, and transmitting it, and

the above-described second server has storage means in which an image data for every sort of the mobile phones is held, and image delivering means for reading out an image data corresponding to the information on the sorts of the phones, which is added to the demand, from the above-described storage means, and for transmitting it to the above-described mobile phones via the above-described first server, an advantage same as in the above-mentioned arrangement can be obtained.

Also, by constructing the above-described second server so as to have an address table in which electronic mail addresses of members are described, means for concurrently transmitting electronic mails in which a destination to be linked for down-loading a deliverable image data is set to addresses described in the above-described address table, and means for responding to access based on a link from the above-described electronic mails and transmitting the image data to the above-described mobile phones, and

constructing the above-described mobile phones so as to

have electronic mail transmitting and receiving means for transmitting and receiving an electronic mail, access means for receiving an electronic mail by means of the above-described electronic mail transmitting and receiving means, and for having access to the destination to be linked, which is set in the above-described electronic mail, image display controlling means for displaying an image down-loaded from the above-described destination to be linked on the above-described display means, and hold means for holding the image down-loaded from the above-described place to be linked in a region of the above-described storage means, to which access control is applied, so called push type service can be provided, and further, it is possible for a user to save time for reading out a menu of an image delivery one by one.

Also, if the above-described mobile phones further have member registration demand means for transmitting a member registration demand of mail delivery service, electronic mail transmitting means which is started by means of the above-described second server, and means for setting a mail address of the second server, which is provided from the second server, in a destination to which an electronic mail will be transmitted, when the above-described electronic mail transmitting means is started, setting a mail address of a user in an origin of transmission, and

setting a mail identifier provided from the second server in an electronic mail and transmitting it to a destination of transmission, and

5 the above-described second server further has means for, when receiving the member registration demand, generating a mail identifier which has a relationship in pairs with a user identifier of a member who transmitted the above-described member registration demand, means for starting the electronic mail transmitting and receiving means of
10 the above-described mobile phones, and for transmitting the mail address and the above-described mail identifier of the second server to the above-described mobile phones, and means for receiving an electronic mail, specifying a user identifier from the mail identifier that is set in
15 the above-described electronic mail, and describing the specified user identifier and the mail address of a user, which is set in the above-described electronic mail, in the address table in pairs, even in a mail interface, a mail address coincident with a user ID can be exactly
20 obtained.

The above-described objective of the present invention is accomplished by an image delivering system having

a mobile communication network, a plurality of mobile phones connected to the above-described mobile
25 communication network, a first server connected to the

above-described mobile phones via the above-described mobile communication network, a network, and a second server connected to the above-described first server via the above-described network,

5 characterized in that the above-described first server has means for connecting the mobile phones to the above-described network,

the above-described second server has storage means for holding an image data, an address table in which
10 electronic mail addresses of members of image delivery service are described, means for concurrently transmitting electronic mails in which a destination to be linked for transmitting a deliverable image data is set to addresses described in the above-described address table, and means
15 for transmitting the image data to the above-described mobile phones based on a link that is set in the above-described electronic mails, and

the above-described mobile phones have display means for displaying an image, electronic mail receiving means for
20 receiving an electronic mail, access means for receiving an electronic mail by means of the above-described electronic mail receiving means, and for having access to a destination to be linked, which is set in the above-described electronic mail, and image display controlling
25 means for displaying an image down-loaded from the above-

described destination to be linked on the above-described display means.

In accordance with the present invention, push type image delivery service can be provided, which is not in
5 the conventional pull type service.

In addition, it is preferable that the image to be delivered from the destination to be linked is an updated image.

Also, if the above-described mobile phones further have
10 member registration demand means for transmitting a member registration demand of mail delivery service, electronic mail transmitting means which is started by means of the above-described second server, and means for setting a mail address of the second server, which is provided from
15 the second server, in a destination to which an electronic mail will be transmitted, when the above-described electronic mail transmitting means is started, setting a mail address of a user in an origin of transmission, and setting a mail identifier provided from the second server
20 in an electronic mail and transmitting it to a destination of transmission, and

the above-described second server has means for, when receiving the member registration demand, generating a mail identifier which has a relationship in pairs with a
25 user identifier of a member who transmitted the above-

described member registration demand, means for starting
the electronic mail transmitting and receiving means of
the above-described mobile phones, and for transmitting
the mail address and the above-described mail identifier
5 of the second server to the above-described mobile phones,
and means for receiving an electronic mail, specifying a
user identifier from the mail identifier that is set in
the above-described electronic mail, and describing the
specified user identifier and the mail address of a user,
10 which is set in the above-described electronic mail, in
the address table in pairs, even in a mail interface, a
mail address coincident with a user ID can be exactly
obtained.

Also, if the above-described mobile phones have means
15 for transmitting information on sorts of their own phones,
and

the above-described second server has storage means in
which an image data for every sort of the mobile phones is
held, and image delivering means for reading out an image
20 data corresponding to information on the sorts of the
above-described mobile phones from the above-described
storage means, and transmitting it to the above-described
mobile phones via the above-described first server,
inconvenience of a display, which occurs due to a
25 difference of the sorts of the mobile phones, can be

avoided.

Also, in case that the above-described first server has a table of information on sorts of the phones, in which intrinsic identifiers of the mobile phones and information on sorts of the above-described mobile phones are
5 described in association with each other, and means for, in response to a demand from the mobile phones, retrieving the information on the sorts of the above-described mobile phones from the above-described table of information on
10 the sorts of the phones, based on the intrinsic identifiers added to the above-described demand, and for adding this information on the sorts of the phones to the above-described demand, and transmitting it, and

the above-described second server has storage means in
15 which an image data for every sort of the mobile phones is held, and image delivering means for reading out an image data corresponding to the information on the sorts of the phones, which is added to the demand, from the above-described storage means, and for transmitting it to the
20 above-described mobile phones via the above-described first server, an advantage same as in the above-mentioned arrangement can be obtained.

Also, if the above-described mobile phones have storage means having a region to which access control is applied,
25 and hold means for holding a down-loaded image data in the

region of the above-described storage means, to which access control is applied, a copyright of the delivered image can be protected.

5 The above-described objective of the present invention is accomplished by an image delivering method in a network system having a mobile communication network, a plurality of mobile phones connected to the above-described mobile communication network, a first server connected to the above-described mobile phones via the above-described
10 mobile communication network, a network, and a second server connected to the above-described first server via the above-described network,

characterized in that the method has:

15 a step in which, in response to a request of an image delivery from the mobile phones, the first server sets a user identifier corresponding to an intrinsic identifier of the above-described mobile phones in the above-described request, and transmits it to the second server;

20 a step in which the above-described second server receives the request from the above-described first server, checks right and wrong of an image delivery based on the user identifier that is set in the above-described request, and transmits a requested image data to the above-described mobile phones if a result of the check indicates
25 a user to whom an image delivery may be conducted; and

a step in which the above-described mobile phones receive the image data, and hold the received image data in a storage region to which access from a user is restricted.

5 In accordance with the present invention, since an image data to be delivered is held in a storage region to which access control is applied, in other words, since a user freely reads out an image data to be delivered, and the read-out image is held in a storage region in which it
10 cannot be delivered to others again or cannot be processed, protection of a copyright of the delivered image can be promoted.

In addition, it is preferable that the image to be delivered is updated every day.

15 Also, if the method further has:

a step of holding an image data for every sort of the mobile phones in the second server;

a step in which, when transmitting a request, the mobile phones add information on sorts of their own phones
20 thereto and transmit it; and

a step in which the second server delivers an image data corresponding to the information on the sorts of the above-described mobile phones to the mobile phones, inconvenience of a display, which occurs due to a
25 difference of the sorts of the mobile phones, can be

avoided.

Also, if the method further has:

5 a step of generating a table of information on sorts of the phones in the above-described first server, in which the intrinsic identifiers of the mobile phones and information on sorts of the above-described mobile phones are described in association with each other;

a step of holding an image data for every sort of the mobile phones in the second server;

10 a step in which, in response to a request from the mobile phones, the first server retrieves the information on the sorts of the above-described mobile phones from the above-described table of information on the sorts of the phones, based on the intrinsic identifiers added to the
15 above-described request, and adds this information on the sorts of the phones to the above-described demand, and transmits it to the second server; and

a step in which the second server delivers an image data corresponding to the information on the sorts of the
20 above-described mobile phones to the mobile phones based on the information on the sorts of the phones, which is added to the request, an advantage same as the above-mentioned one can be obtained.

Also, if the method has:

25 a step of providing an address table in the second

server, in which electronic mail addresses of members to whom electronic mails are delivered;

5 a step of concurrently transmitting from the second server electronic mails in which a destination to be linked for down-loading a deliverable image data is set to addresses described in the above-described address table; and

10 a step of receiving an electronic mail, having access to the destination to be linked, which is set in the received electronic mail, down-loading an image data, and displaying an image of the down-loaded image data, it is possible to provide so called push type service.

Also, in addition to the above-described invention, if the method has:

15 a step in which the mobile phones transmit a registration request of an electronic mail address;

a step in which the first server sets a user identifier in the above-described registration request;

20 a step in which the second server generates a presumptive identifier which has a relationship in pairs with the above-described user identifier that is set in the above-described registration request;

25 a step of transmitting the above-described presumptive identifier and the electronic mail addresses of the above-described second server to the above-described mobile

phones, and of starting a function of an electronic mail
of the above-described mobile phones, setting an
electronic mail address of a user in an origin of
transmission of an electronic mail on the above-described
5 mobile phones, setting the electronic mail addresses of
the above-described second server in a destination to
which the electronic mail is transmitted, and setting the
above-described presumptive identifier in the electronic
mail;

10 a step of transmitting the above-described electronic
mail from the above-described mobile phones, in which the
presumptive identifier is set;

a step in which the above-described second server
extracts the presumptive identifier from the received
15 electronic mail, and retrieves a user identifier which has
a relationship in pairs with the presumptive identifier;
and

a step of registering the above-described electronic
mail address of a user, which is described in an origin of
20 transmission of the received electronic mail, and the
above-described retrieved user identifier in the address
table in pairs, even in a mail interface, a mail address
coincident with a user ID can be exactly obtained.

The above-described objective of the present invention
25 is accomplished by an image delivering method in a network

system having a mobile communication network, a plurality of mobile phones connected to the above-described mobile communication network, a first server connected to the above-described mobile phones via the above-described mobile communication network, a network, and a second server connected to the above-described first server via the above-described network,

characterized in that the method has:

10 a step of concurrently transmitting electronic mails in which a destination to be linked for down-loading an image to be delivered is set to previously registered electronic mail addresses that are destinations of the transmission;

15 a step of receiving an electronic mail, and requesting to deliver an image to a destination to be linked, which is set in the electronic mail from the mobile phones, via the first server;

20 a step in which, in response to a request of an image delivery from the mobile phones, the first server sets a user identifier corresponding to an intrinsic identifier of the above-described mobile phones in the above-described request, and transmits it to the second server;

25 a step in which the above-described second server receives the request from the above-described first server, checks right and wrong of an image delivery based on the user identifier that is set in the above-described request,

and transmits an image data specified by the request to the above-described mobile phones if a result of the check indicates a user to whom an image delivery may be conducted; and

5 a step in which the above-described mobile phones receive the image data, and display an image of the received image data.

10 In accordance with the present invention, push type image delivery service can be provided, which is not in the conventional pull type service.

Also, if the method further has a step of holding the received image data in a storage region to which access from a user is restricted, protection of a copyright of the delivered image can be promoted.

15 Also, it is preferable that the image to be delivered is updated every day.

Also, if the method further has:

a step of holding an image data for every sort of the mobile phones in the second server;

20 a step in which, when transmitting a request, the mobile phones add information on sorts of their own phones thereto and transmit it; and

a step in which the second server delivers an image data corresponding to the information on the sorts of the above-described mobile phones to the mobile phones,

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inconvenience of a display, which occurs due to a difference of the sorts of the mobile phones, can be avoided.

Also, if the method further has:

- 5 a step of generating a table of information on sorts of the phones in the above-described first server, in which the intrinsic identifiers of the mobile phones and information on sorts of the above-described mobile phones are described in association with each other;
- 10 a step of holding an image data for every sort of the mobile phones in the second server;
- a step in which, in response to a request from the mobile phones, the first server retrieves the information on the sorts of the above-described mobile phones from the above-described table of information on the sorts of the phones, based on the intrinsic identifiers added to the above-described request, and adds this information on the sorts of the phones to the above-described demand, and transmits it to the second server; and
- 15 a step in which the second server delivers an image data corresponding to the information on the sorts of the above-described mobile phones to the mobile phones based on the information on the sorts of the phones, which is added to the request, an advantage same as the above-
- 20 mentioned one can be obtained.
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Also, the method has:

a step in which the mobile phones transmit a registration request of an electronic mail address;

5 a step in which the first server sets a user identifier in the above-described registration request;

a step in which the second server generates a presumptive identifier which has a relationship in pairs with the above-described user identifier that is set in the above-described registration request;

10 a step of transmitting the above-described presumptive identifier and the electronic mail addresses of the above-described second server to the above-described mobile phones, and of starting a function of an electronic mail of the above-described mobile phones, setting an
15 electronic mail address of a user in an origin of transmission of an electronic mail on the above-described mobile phones, setting the electronic mail addresses of the above-described second server in a destination to which the electronic mail is transmitted, and setting the
20 above-described presumptive identifier in the electronic mail;

a step of transmitting the above-described electronic mail from the above-described mobile phones, in which the presumptive identifier is set;

25 a step in which the above-described second server

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extracts the presumptive identifier from the received
electronic mail, and retrieves a user identifier which has
a relationship in pairs with the presumptive identifier;
and

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a step of registering the above-described electronic mail address of a user, which is described in an origin of transmission of the received electronic mail, and the above-described retrieved user identifier in pairs, even in a mail interface, a mail address coincident with a user ID can be exactly obtained.

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BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a block diagram of a first embodiment of the
15 present invention,

Fig. 2 is a block diagram of information provider server,

Fig. 3 is a view showing one example of a member list
table,

Fig. 4 is a view showing one example of an image folder,

20 Fig. 5 is a view showing one example on how an image
provided by the present invention is used,

Fig. 6 is a block diagram of a gateway server,

Fig. 7 is a view showing one example of a user ID list
table,

25 Fig. 8 is a block diagram of a mobile phone,

Fig. 9 is a conceptual view of a storage section,

Fig. 10 is an operation flowchart of a member
registration in the first embodiment,

5 Fig. 11 is an operation flowchart of down-loading of an
image in the first embodiment,

Fig. 12 is a view showing one example of an image folder
in a second embodiment,

Fig. 13 is an operation flowchart of down-loading of an
image in the second embodiment,

10 Fig. 14 is an operation flowchart of a member
registration in a third embodiment,

Fig. 15 is a view showing one example of a mail delivery
member list table, and

15 Fig. 16 is an operation flowchart of down-loading of an
image in the third embodiment.

EMBODIMENTS OF THE INVENTION

A first embodiment of the present invention will be
explained.

20 Fig. 1 is a block diagram of the first embodiment.

In Fig. 1, 1 is an information provider server (IP
server) for providing contents, 2 is a gateway server, 3
is a base station, 4 is mobile phones, 5 is a fixed
communication network on a side of the gateway server 2, 6
25 is a communication network (internet) for connecting the

gateway server 2 to the IP server 1, and 7 is a mobile communication network.

Next, each of the above-mentioned elements will be explained.

5 First, the IP server 1 will be explained in detail.

Fig. 2 is a block diagram of the IP server 1. In Fig. 2, 21 is a transmission and reception section for conducting transmission and reception of a data, 22 is a modulation and demodulation section for modulating and demodulating the transmitted and received data in the transmission and reception section 21, 23 is a hard disk in which a program, a user list, an image data to be delivered, and so forth are held, and 24 is an MPU for conducting a process such as an HTTP request and an HTTP response in accordance with the program held in the hard disk 23.

15 In the hard disk 23, a member list table 31 and an image folder 32 in which an image data to be delivered is held are held.

The member list table 31 is a table in which user ID's of members of image delivery service, and an admission date when a member registration is made are described contents by contents. The user ID is an identifier for specifying a user, and is transmitted from the gateway server 2 that will be mentioned later. Fig. 3 is a view showing one example of the member list table 31, and shows

that contents to be provided are from contents A to contents X, and that a user ID of a member and an admission date of the member of each of the contents are described in association with each other.

5 The image folder 32 is a folder in which an image data to be delivered is held, and its directory structure is, as shown in Fig. 4, constructed of an image folder 321 for the day, in which an updated image data is held, and an image folder 322 for a back number, in which an image data
10 of the back number is held. An image held in each folder is an image that is displayed on a display of the mobile phone 4, and for example, as shown in Fig. 5, it can be used as a waiting screen of the mobile phone 4. Also, as shown in Fig. 4, an identifier for discriminating images
15 is allocated to each image data. In Fig. 4, it indicates an image (a character) that is held in the image folder 321 and the image folder 322 of the contents A. In addition, since an image data that is delivered in this service is added thereto every day, when an updated image
20 data is held in the image folder 321 for the day, the image data held in the image folder 321 is moved to the image folder 322 for the back number together with the date of the image data. Also, the image data held in the image folder 322 for the back number is automatically
25 erased after a certain period of time has passed.

Next, the gateway server 2 will be explained.

The gateway server 2 has a role of a gateway to the IP server 1, and has a role for transmitting information from the mobile phones to the IP server 1 in accordance with demands from the mobile phones 4.

Fig. 6 is a block diagram of the gateway server 2. In Fig. 6, 61 is a transmission and reception section for conducting transmission and reception of a data, 62 is a modulation and demodulation section for modulating and demodulating the transmitted and received data in the transmission and reception section 61, 63 is a hard disk in which a program and so forth are held, and 64 is an MPU for conducting a process of a relay function for the mobile phones 4 and the IP server 1 in accordance with the program.

In the hard disk 63, in addition to the program, a user ID list table 70 is held. As shown in Fig. 7, this user ID list table 70 is a table in which the telephone numbers of the mobile phones 4, intrinsic identifiers for discriminating the mobile phones 4 of these telephone numbers, and user ID's that have a relationship in pairs with these intrinsic identifiers are described in association with each other.

In a web-interface that is conducted via the gateway server 2, the gateway server 2 is constructed so as to,

when a request comes from the mobile phones 4, convert the intrinsic identifier which is provided to the request of the mobile phones 4 into a user ID corresponding to this intrinsic identifier by using the above-mentioned user ID list table 70, and to transfer the request to the IP server 1.

In addition, as typical one of such a gateway server 2, there is an i-mode server in i-mode service that is provided by NTT DoCoMo.

Next, the mobile phones 4 will be explained. Fig. 8 is a block diagram of a mobile phone 4.

The mobile phone 4 has a display 91 on which an image is displayed, a VRAM 92 (Video Random Access Memory) for displaying an image on the above-described display 91, a transmission and reception section 93 for transmitting and receiving a data, a modulation and demodulation section 94 for conducting modulation and demodulation of a data transmitted and received in the transmission and reception section 93, a storage section 95 in which a data is held, an operating section 96 that is used for selection and so forth of an image, and a CPU 97 for conducting control of each section and a process of a data.

The mobile phone 4 is constructed so as to, in case of transmitting a request and so forth to the IP server 1, add an intrinsic identifier for discriminating self to the

request and so forth, and to transmit it.

As shown in Fig. 9, the storage section 95 is divided into a region 98 where a user of the mobile phone 4 can freely conduct reading and writing, and a region 99 where the user cannot freely conduct reading and writing. In the region 98, data such as a telephone dictionary of users and so forth are held, and writing, reading and deleting can be freely conducted by a user. On the other hand, in the region 99, reading and editing cannot be freely conducted by a user, and such data that distribution thereof to others makes the user trouble are held. For example, an image data and so forth of a character to be delivered in the service of the present invention is held in the region 99 from a copyright protection point of view.

Further, the mobile phone 4 can down-load an image data via the transmission and reception section 93, which is held in the IP server 1. And, it is possible to show the down-loaded image data on the display 91, and to use it as a waiting screen. Also, the down-loaded image data can be held in the region 99 of the storage section 95, and also, can be displayed on the display 91 again under a certain condition.

Next, the operation of the embodiment of the present invention in the above-mentioned arrangement will be explained. In addition, in the explanation of this

operation, the operation of a member registration for utilizing image delivery service and the operation for down-loading an image to the mobile phones 4 will be explained separately.

5 <Member registration>

For utilizing this service, first, a member registration is conducted.

Fig. 10 is an operation flowchart showing the operation of the member registration.

10 First, a user of the mobile phone 4 operates the operating section 96 of the mobile phone 4, and selects a site of the IP server 1, in which the member registration is conducted, and transmits an HTTP request (Step 100). In Fig. 10, it is shown that "GET
15 http://IP1.menu.or.jp/uid=xxxxxxx" is transmitted from the mobile phone 4 as the HTTP request. In addition, as an example of the above-described request, "IP1" indicates the IP server 1, "menu" indicates a menu screen of the member registration, and "xxxxxxx" out of "uid=xxxxxxx"
20 indicates an intrinsic identifier of the mobile phone 4, respectively.

In the gateway server 2 that received the request, a user ID corresponding to the intrinsic identifier of the mobile phone 4 is retrieved from the user ID list table 70,
25 and the intrinsic identifier added to the received request

is converted into the retrieved user ID, and is transmitted to the IP server 1 (Step 101). In this operation, since the intrinsic identifier added to the request from the mobile phone 4 is "xxxxxxx", if a user ID
5 corresponding to this intrinsic identifier is retrieved from the user ID list table 70, the user ID corresponding to "xxxxxxx" is "abcdefgh". Accordingly, "xxxxxxx" is converted into "abcdefgh", and "GET
http://IP1.menu.or.jp/uid=abcdefgh" is transmitted to the
10 IP server 1.

In the IP server 1, "uid=abcdefgh" out of the received request "GET http://IP1.menu.or.jp/uid=abcdefgh" is extracted, and whether or not the corresponding user ID is already registered is checked by retrieving the member
15 list table 31. If the corresponding user ID is not described in the member list table 31, an HTML source for the member registration as a response is transmitted to the gateway server 2 (Step 102).

In the mobile phone 4, the response is received, and in
20 accordance with instruction displayed on a screen, a request for the member registration is transmitted (Step 103). For example, as the request from the mobile phone 4, it is assumed that "http://IP1.request.or.jp/uid=xxxxxxx" is transmitted. Here, "request" indicates a demand of the
25 member registration.

In the gateway server 2, the request
"http://IP1.request.or.jp/uid=xxxxxxx" from the mobile
phone 4 is received, and by means of the operation same as
the above-mentioned Step 101, namely, an intrinsic
5 identifier is converted into a user ID, and is transmitted
to the IP server 1 (Step 104).

In the IP server 1, the request of the member
registration from the mobile phone 4 is received, and the
user ID described in the request, namely in this example,
10 "abcdefgh" is newly described in the member list table 31,
and processing of the member registration is conducted
(Step 105). Thereafter, a response of completion of the
member registration is transmitted to the mobile phone 4
via the gateway server 2 (Step 106).

15 By means of the above operation, the member registration
is completed.

<Delivery of an image data>

Next, the delivery operation of an image data after the
member registration will be explained.

20 Fig. 11 is an operation flowchart showing the operation
of an image data delivery.

First, a user of the mobile phone 4 operates the
operating section 96 of the mobile phone 4, and selects a
site of the IP server 1, in which the image delivery is
25 conducted, and transmits an HTTP request (Step 200). In

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Fig. 11, it is shown that "GET

http://IP1.channel.or.jp/uid=xxxxxxx" is transmitted from the mobile phone 4 as the HTTP request. In addition, as an example of the above-described request, "IP1" indicates the IP server 1, "channel" indicates a demand of a menu of the image delivery, and "xxxxxxx" out of "uid=xxxxxxx" indicates an intrinsic identifier of the mobile phone 4, respectively.

In the gateway server 2 that received the request, a user ID corresponding to the intrinsic identifier of the mobile phone 4 is retrieved from the user ID list table 70, and the intrinsic identifier added to the received request is converted into the retrieved user ID, and is transmitted to the IP server 1 (Step 201). In this operation, since the intrinsic identifier added to the request from the mobile phone 4 is "xxxxxxx", if a user ID corresponding to this intrinsic identifier is retrieved from the user ID list table 70, the user ID is "abcdefgh". Accordingly, "xxxxxxx" is converted into "abcdefgh", and "GET http://IP1.channel.or.jp/uid=abcdefgh" is transmitted to the IP server 1.

In the IP server 1, whether or not "abcdefgh", which is the user ID, out of the received request "GET http://IP1.channel.or.jp/uid=abcdefgh" is already registered is checked by retrieving the member list table

31 (Step 202). Since, in the operation of the member registration, the user of the mobile phone 4 finished the member registration, the user ID is described in the member list table 31. Accordingly, an HTML source for the image delivery as a response is transmitted to the mobile
5 phone 4 via the gateway server 2.

In the mobile phone 4, the response is received, and in accordance with instruction displayed on a screen, a request for a delivery of a desired image is transmitted
10 (Step 203). For example, as the request from the mobile phone 4, it is assumed that

"http://IP1.channel.or.jp/chara=new1/uid=xxxxxxx" is transmitted. In addition, it is assumed that "chara=new1" out of the request to be transmitted indicates
15 discrimination information of a desired image to be delivered, and "new1" indicates an updated image, namely, an image data of a today's character.

In the gateway server 2, the request "http://IP1.channel.or.jp/chara=new1/uid=xxxxxxx" from the
20 mobile phone 4 is received, and by means of the operation same as the above-mentioned Step 201, namely, an intrinsic identifier is converted into a user ID, and is transmitted to the IP server 1 (Step 204).

In the IP server 1, the request from the mobile phone 4
25 is received, and in the same manner as Step 202, the

member list table is retrieved, and if it is confirmed
that it is a member, based on the discrimination
information of an image data, which is described in the
request, an image data held in the image folder 32 is read
5 out, and is transmitted to the mobile phone 4 via the
gateway server 2 (Step 205). In this operation, since the
request is

"http://IP1.channel.or.jp/chara=new1/uid=abcdefgh", the
discrimination information of an image is "new1", and this
10 indicates an image data of a today's character, and an
image data is read from the image folder 321 for the day,
and is transmitted to the mobile phone 4 via the gateway
server 2.

In the mobile phone 4, the image data is received, and
15 the received image data is held in the VRAM 92 and is
displayed on the display (Step 206). On the other hand, in
case that the down-loaded image data is displayed again,
it is held in the region 99 of the storage section 95
(Step 207).

20 By means of the above operation, the image data of a
character is down-loaded in the mobile phone 4. Also, even
in case of storing the down-loaded image data, since the
image data is held in the region of the storage section,
to which access control by a user is applied, such actions
25 that the stored image data is sent to others and is newly

edited, which infringe a copyright, are not made.

A second embodiment will be explained.

At present, there are various kinds of mobile phones that are being sold, and they have various screen sizes and image data in various sizes, which can be displayed, respectively. Therefore, if only one kind of image data to be delivered is prepared, not only it is not exactly displayed, but there is a case in which it cannot be displayed at all, which depends on a sort of the mobile phone. Accordingly, in the second embodiment, it is characterized in that an image data in accordance with a sort of the mobile phone is prepared for the same contents, and a function for delivering an image data in accordance with the sort of the phone is added to the first embodiment. In addition, in the explanation of the second embodiment, the same numerals in the figures are attached to elements same as those in the first embodiment, and detailed explanation thereof will be omitted.

Presently, in each kind of services, when the mobile phone transmits a request, it transmits information on a sort of its own phone. Accordingly, in the second embodiment, it is constructed so that this information on the sort of the phone is determined in the IP server 1, and an image data in accordance with the sort of the phone is selected and delivered. Accordingly, as an image data

to be prepared, as shown in Fig. 12, folders for each sort of phones are prepared in the image folder 32, and in the folder of each sort of the phones, an image data corresponding to its sort the phone is held. In Fig. 12, it is shown that the folders from a sort AAA of a phone to a sort ZZZ of a phone are provided, and that, in the folder of each sort of the phone, for example, a folder of a sort NNN of a phone, a folder in which an image data for the day is held, and a folder for a back number, in which a past image data is held, are provided. In addition, in the same manner, menus for an image delivery are prepared for every sort of a phone.

Below, operation in the above-described arrangement will be explained.

Fig. 13 is an operation flowchart showing the operation of an image data delivery for every sort of a phone.

First, a user of the mobile phone 4 operates the operating section 96 of the mobile phone 4, and selects a site of the IP server 1, in which the image delivery is conducted, and transmits an HTTP request (Step 300). In Fig. 14, it is shown that "GET http://IP1.channel.or.jp/uid=xxxxxxx user=NNN" is transmitted from the mobile phone 4 as the HTTP request. In addition, as an example of the above-described request, "IP1" indicates the IP server 1, "channel" indicates a

demand of a menu of an image delivery, "xxxxxxx" out of "uid=xxxxxxx" indicates an intrinsic identifier of the mobile phone 4, and "user=NNN" indicates a sort of the mobile phone 4, respectively.

5 In the gateway server 2 that received the request, a user ID corresponding to the intrinsic identifier of the mobile phone 4 is retrieved from the user ID list table 70, and the intrinsic identifier added to the received request is converted into the retrieved user ID, and is
10 transmitted to the IP server 1 (Step 301). In this operation, since the intrinsic identifier added to the request from the mobile phone 4 is "xxxxxxx", if a user ID corresponding to this intrinsic identifier is retrieved from the user ID list table 70, the corresponding user ID
15 is "abcdefgh". Accordingly, "xxxxxxx" is converted into "abcdefgh", and "GET http://IP1.channel.or.jp/uid=abcdefgh user=NNN" is transmitted to the IP server 1.

 In the IP server 1, whether or not "abcdefgh" out of the received request "GET
20 http://IP1.channel.or.jp/uid=abcdefgh user=NNN", which is a user ID, is already registered is checked by retrieving the member list table 31 (Step 302). Since, in the operation of the member registration, a user of the mobile phone 4 finished the member registration, the user ID is
25 described in the member list table 31.

Accordingly, from the information "user=NNN" on the sort of the phone, an HTML source for the image delivery for the sort NNN of the phone as a response is transmitted to the mobile phone 4 via the gateway server 2 (Step 303).

5 In the mobile phone 4, the response is received, and in accordance with instruction displayed on a screen, a request for demanding a delivery of a desired image is transmitted (Step 304). For example, as the request from the mobile phone 4, it is assumed that

10 "http://IP1.channel.or.jp/chara=new1/uid=xxxxxxx user=NNN" is transmitted. In addition, it is assumed that "chara=new1" out of the request to be transmitted indicates discrimination information of a desired image to be delivered, and "new1" indicates an updated image,

15 namely, an image data of a today's character.

 In the gateway server 2, the request

 "http://IP1.channel.or.jp/chara=new1/uid=xxxxxxx user=NNN" from the mobile phone 4 is received, and by means of the operation same as the above-mentioned Step 301, namely, an

20 intrinsic identifier is converted into a user ID, and is transmitted to the IP server 1 (Step 305).

 In the IP server 1, the request from the mobile phone 4 is received, and like at Step 302, the member list table is retrieved (Step 306). If it is confirmed that it is a

25 member, the request moves from the information on the sort

of the phone to the image folder for the sort of the phone,
and further, based on the discrimination information of
the image data, which is described in the request, the
image data held in the image folder is read out, and is
5 transmitted to the mobile phone 4 via the gateway server 2
(Step 307). In this operation, since the request is
"http://IP1.channel.or.jp/chara=new1/uid=abcdefgh
user=NNN", the information on a sort of a phone is "NNN",
and the discrimination information of an image is "new1".
10 This indicates an image data of a today's character for
the sort NNN of the phone, and an image data is read from
the image folder for the day for the sort NNN of the phone,
and is transmitted to the mobile phone 4 via the gateway
server 2.

15 In the mobile phone 4, the image data is received, and
the received image data is held in the VRAM 92 and is
displayed on the display (Step 308). On the other hand, in
case that the down-loaded image data is displayed again,
it is held in the region 99 of the storage section 95
20 (Step 309).

By means of the above operation, an image data that is
the most suitable for the sort of a phone becomes to be
delivered to the mobile phone 4, and inconvenience that an
image data cannot be displayed in a certain sort of a
25 phone can be avoided.

In addition, in the above-mentioned second embodiment, the information on the sort of the mobile phone 4 is constructed so as to be transmitted from the mobile phone 4. However, an arrangement can be adopted, wherein a table, in which information on a sort of the mobile phone 4 and an intrinsic identifier of the mobile phone 4 are described in association with each other, is previously prepared in the gateway server 2, and in case that a request is issued from the mobile phone 4, based on an intrinsic identifier added to the request, the information on the sort of the mobile phone 4 is retrieved from the above-described table, and the retrieved information of the sort of the phone is added to the request, and is transmitted to the IP server 1.

Even though such an arrangement is adopted, since the IP server 1 can obtain the information on the sort of the mobile phone 4, which it needs, an image data suitable for the sort of the mobile phone can be selected.

A third embodiment will be explained.

Although it is already mentioned that, at present, the mobile phone can conduct transmission and reception of a data, by adapting this, each company can receive service of a so called electronic mail. On the other hand, the above-mentioned first embodiment and second embodiment are so called pull type service. Accordingly, in the third

embodiment, it is characterized in that a system for so called push type service is provided, wherein the system is constructed so that information of a daily updated image is notified to a user by an electronic mail, and an
5 updated image data is down-loaded by means of an operation of a link by the user, which is set in the received electronic mail.

Also, in the third embodiment, since an electronic mail is used, like in the above-mentioned first embodiment and
10 second embodiment, not only a web-interface, namely, a communication system of an HTTP (Hyper Text Transfer Protocol), but also a mail interface, namely, a communication system of an SMTP (Simple Mail Transfer Protocol) are used. Usually, in the communication system
15 of the SMTP, the gateway server 2 does not add a user ID to an electronic mail. Accordingly, for maintaining a relationship with the user ID, specific processing is conducted.

Below, an arrangement will be mentioned. In addition, in
20 the explanation of the third embodiment, the same numerals in the figures are attached to elements same as those in the first embodiment and the second embodiment, and detailed explanation thereof will be omitted.

In the third embodiment, provided in the IP server 1 are
25 means for responding to a request from the mobile phone 4,

based on the communication system of the HTTP, and
starting an electronic mail function of the mobile phone 4
by using a function such as a CGI script and so forth, for
example, means for generating a mail delivery list of
5 members who desire a delivery of an electronic mail that
has been transmitted from the mobile phone 4, and means
for notifying the members of the electronic mail, which
are described in the mail delivery list, based on the
communication system of the SMTP.

10 Further, as mentioned above, since transmission and
reception of an electronic mail are conducted by means of
the communication system of the SMTP, the IP server 1
cannot obtain a user ID for discriminating users from the
electronic mail. Accordingly, this embodiment is
15 constructed so that means for generating a mail identifier
which has a relationship in pairs with the obtained user
ID is provided, and the generated mail identifier is set
in an electronic mail to be transmitted, and is
transmitted.

20 In addition, these means are realized in the MPU 24 of
the IP server 1.

Below, the operation of the third embodiment will be
explained. In addition, in the explanation of this
operation, the operation of a member registration for
25 utilizing mail delivery service and the operation for

down-loading an image to the mobile phones 4 will be explained separately.

<Mail delivery member registration>

For utilizing this service, first, a member registration
5 of a mail delivery is conducted.

Fig. 14 is an operation flowchart showing the operation of the mail delivery member registration.

First, a user of the mobile phone 4 operates the operating section 96 of the mobile phone 4, and selects a
10 site of the IP server 1, in which the member registration is conducted, and transmits an HTTP request based on the communication system of the HTTP (Step 400). In Fig. 14, it is shown that "http://IP1.mail.or.jp/uid=xxxxxxx
user=NNN" is transmitted from the mobile phone 4 as the
15 HTTP request. In addition, as an example of the above-described request, "IP1" indicates the IP server 1, "mail" indicates a menu screen of the mail delivery member registration, "xxxxxxx" out of "uid=xxxxxxx" indicates an intrinsic identifier of the mobile phone 4, and "user=NNN"
20 indicates a sort of the mobile phone 4, respectively.

In the gateway server 2 that received the request, since the request is one based on the communication system of the HTTP, a user ID corresponding to the intrinsic
25 identifier of the mobile phone 4 is retrieved from the user ID list table 70, and the intrinsic identifier added

to the received request is converted into the retrieved user ID, and is transmitted to the IP server 1 (Step 401). In this operation, since the intrinsic identifier added to the request from the mobile phone 4 is "xxxxxxx", if a
5 user ID corresponding to this intrinsic identifier is retrieved from the user ID list table 70, the user ID corresponding to "xxxxxxx" is "abcdefgh". Accordingly, "xxxxxxx" is converted into "abcdefgh", and "http://IP1.mailmenu.or.jp/uid=abcdefgh user=NNN" is
10 transmitted to the IP server 1.

In the IP server 1, whether or not the user ID "abcdefgh" out of the received request "http://IP1.mail.or.jp/uid=abcdefgh user=NNN" is already registered is checked by retrieving a mail delivery member
15 list table 150. Fig. 15 is a view showing one example of the mail delivery member list table 150, and in the mail delivery member list table 150, a user ID of a member of the mail delivery service, an mail address of the member, and an admission date when the member registration was
20 made are described contents by contents in association with each other. If a corresponding user ID is not described in the mail delivery member list table 150, the request of the member registration from the mobile phone 4 is received, and a response for starting a function of an
25 electronic mail of the mobile phone 4, for example a

program of a mailer by means of a CGI script and so forth
is transmitted. At this time, an identifier having a
relationship in pairs with the extracted user ID
"abcdefgh", for example "200000504" is generated. And,
5 this generated mail identifier "200000504" and a mail
address which the IP server 1, for example
"mail@zpl.or.jp" has are added to the response, and are
transmitted (Step 403).

10 The above processing is conducted by means of the
communication system of the HTTP.

In addition, since processing of Step 405 and Step 407
mentioned later is conducted by means of the communication
system of the SMPT, explanation of the gateway server 2
will be omitted.

15 In the mobile phone 4, when the response is received, an
electronic mail transmission and reception function is
started (Step 404). And, a destination of transmission of
an electronic mail is set to be a mail address
"mail@IP1.or.jp", and an origin of transmission of the
20 mail is set to be a mail address "user@xxx.or.jp" of a
user (the mobile phone 4). Also, the received mail
identifier "20000204" is set in a mail to be transmitted
(Step 405). And, the mail in which these settings are made
is transmitted based on the communication system of the
25 SMTP.

In the IP server 1, an electronic mail from the mobile phone 4 is received, and a user ID is specified from the mail identifier "20000504" that is being set in the electronic mail. Further, a mail address of a user is specified from the origin "user@xxx.or.jp" of transmission of the electronic mail. Thereby, the user ID "abcdefgh" and the mail address "user@xxx.or.jp" are coupled to have a relationship in pairs with each other, and are stored (Step 406).

Successively, a site for confirming the member registration is prepared. This site for the confirmation is set so that only the mobile phone 4 having a user ID coupled to the mail address can have access thereto. And, the mail address of the user is set for an address of a destination of transmission of an electronic mail, and the mail address of the IP server 1 is set for an origin of transmission, respectively, and a mail for confirming the member registration, in which a destination to be linked of a site for the exclusive use of a user ID is set, is generated (Step 407). In Fig. 14, it is shown that the mail address "user@xxx.or.jp" of the user is set for an address of a destination of transmission of an electronic mail, and the mail address "mail@IP1.or.jp" of the IP server 1 is set for an origin of transmission, respectively, and "IP1.confirmational.or.jp" is set for a

destination to be linked of the site for the exclusive use of a user ID.

In the mobile phone 4, an electronic mail for registration confirmation is received, and if a
5 registration of a mail delivery is desired, a link button which is being set in the received electronic mail is pushed, and an HTTP request by means of the communication system of the HTTP is transmitted (Step 408).

Since it is the HTTP request by means of the
10 communication system of the HTTP, in the gateway server 2 that received the request, a user ID corresponding to an intrinsic identifier of the mobile phone 4 is retrieved from the user ID list table 70, and the intrinsic identifier added to the received request is converted into
15 the retrieved user ID, and is transmitted to the IP server 1 (Step 409). In this operation, since the intrinsic identifier added to the request from the mobile phone 4 is "xxxxxxx", if a user ID corresponding to this intrinsic identifier is retrieved from the user ID list table 70,
20 the user ID corresponding to "xxxxxxx" is "abcdefgh". Accordingly, "xxxxxxx" is converted into "abcdefgh", and "http://IP1.confirmational.or.jp/uid=abcdefgh user=NNN" is transmitted to the IP server 1.

In the IP server 1, the request is received, and an HTML
25 source of the site is transmitted (Step 410).

In the mobile phone 4, the HTML source is received, and is displayed on a screen. If a registration thereof is desired, a "OK" button displayed on the screen is pushed, and a request of the member registration is transmitted (Step 411). In Fig. 14, it is shown that, as the HTTP request, "http://IP1.confirmational.or.jp/ok/uid=xxxxxxxx user=NNN" is transmitted.

Since it is the HTTP request by means of the communication system of the HTTP, in the gateway server 2 that received the request, a user ID corresponding to an intrinsic identifier of the mobile phone 4 is retrieved from the user ID list table 70, and the intrinsic identifier added to the received request is converted into the retrieved user ID, and is transmitted to the IP server 1 (Step 412). In this operation, since the intrinsic identifier added to the request from the mobile phone 4 is "xxxxxxx", if a user ID corresponding to this intrinsic identifier is retrieved from the user ID list table 70, the user ID corresponding to "xxxxxxx" is "abcdefgh". Accordingly, "xxxxxxx" is converted into "abcdefgh", and "http://IP1.confirmational.or.jp/ok/uid=abcdefgh user=NNN" is transmitted to the IP server 1.

In the IP server 1, in response to the request, the user ID and the mail address that are stored are registered in pairs in the mail delivery member list 150 (Step 413).

By means of the above operation, the member registration is completed.

In addition, in this explanation, for carefully confirming an intention of a registration of a mail delivery by a user, this embodiment is constructed so that, after the site for registration confirmation is linked, and the intention of the registration is confirmed again, the registration in the mail delivery member list 150 is made. However, without confirming the intention of the registration again, the operation for the registration may be finished at a time point when the electronic mail from a user is received. In other words, the process can be constructed so that, at Step 406, at a time point when the user ID and the mail address are coupled to have a relationship in pairs with each other, the mail address and the user ID are registered in pairs in the mail delivery member list 150. In this case, the processing after Step 407 becomes unnecessary.

<Delivery of an image data>

Next, the delivery operation of an image data after the member registration will be explained.

Fig. 16 is an operation flowchart showing the operation of an image data delivery.

First, when an image to be delivered is added to the IP server 1, the IP server generates a mail in which a

destination to be linked is set so that a folder in which the added updated image data is held, and an image are read out (Step 500). And, the generated mail is concurrently transmitted to a mail address described in the mail delivery member list table 150 (Step 501).

In the mobile phone 4, the mail is received, and when a link button that is being set in the electronic mail is pushed, a request is automatically transmitted (Step 502). For example, as the request from the mobile phone 4, it is assumed that

"http://IP1.channel.or.jp/chara=new1/uid=xxxxxxx user=NNN" is transmitted. In addition, "chara=new1" out of the request to be transmitted is discrimination information of the added updated image, and "user=NNN" indicates a sort of the mobile phone 4, respectively. Also, the operation after that is subject to a web-interface.

In the gateway server 2, the request "http://IP1.channel.or.jp/chara=new1/uid=xxxxxxx user=NNN" from the mobile phone 4 is received, and an intrinsic identifier is converted into a user ID, and is transmitted to the IP server 1 (Step 503).

In the IP server 1, whether or not the user ID "abcdefgh" out of the received request "http://IP1.channel.or.jp/chara=new1/uid=abcdefgh user=NNN" is already registered is checked by retrieving

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the member list table 31 (Step 504). Since, in the operation of the member registration, the user of the mobile phone 4 finished the member registration, the user ID is described in the member list table 31. Accordingly, the request moves from information on a sort of the phone to an image folder for the sort of the phone, and further, based on the discrimination information of the image data, which is described in the request, the image data held in the image folder is read out, and is transmitted to the mobile phone 4 via the gateway server 2 (Step 505). In this operation, since the request is "http://IP1.channel.or.jp/chara=new1/uid=abcdefgh user=NNN", the information on a sort of a phone is "user=NNN", and the discrimination information of an image is "new1". This indicates an image data of a today's character for the sort NNN of the phone, and an image data is read from the image folder for the day for the sort NNN of the phone, and is transmitted to the mobile phone 4 via the gateway server 2.

In the mobile phone 4, the image data is received, and the received image data is held in the VRAM 92 and is displayed on the display (Step 506).

On the other hand, in case that the down-loaded image data is displayed again, it is held in the region 99 of the storage section 95 (Step 507).

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CLAIMS

1. An image delivering system having a mobile communication network, a plurality of mobile phones connected to said mobile communication network, a first server connected to said mobile phones via said mobile communication network, a network, and a second server connected to said first server via said network, characterized in that said mobile phones have display means for displaying an image, storage means having a region to which access control is applied, member registration demand means for transmitting a member registration demand of image delivery service, image delivery demand means for transmitting a demand of an image delivery, image selecting means for transmitting image selection information for selecting a desired image data out of a plurality of image data that are held in said second server, and for down-loading the desired image data, hold means for holding said down-loaded image data in the region of said storage means, to which access control is applied, and image controlling means for displaying said down-loaded image on said display means, said first server has a user identifier table in which intrinsic identifiers of said mobile phones, and user identifiers that have a relationship in pairs with these intrinsic identifiers are

described in association with each other, and means for
retrieving the user identifiers corresponding to the
intrinsic identifiers of said mobile phones from the user
identifier table, converting the intrinsic identifiers
5 into user identifiers, and transmitting a demand from said
mobile phones to the second server, and

said second server has

storage means in which a image data to be delivered is
held, a member list table in which user identifiers of
10 members of image delivery service are described, member
registration means for, when receiving a member
registration demand from said first server, determining
whether a user identifier added to this member
registration demand is described in said member list table,
15 and for, if it is not described, describing the user
identifier in said member list table, image list
transmitting means for, when receiving said image delivery
demand, determining whether a user identifier added to
this image delivery demand is described in said member
20 list table, and for, if it is described, transmitting a
list of a deliverable image, and image delivering means
for reading out an image data indicated in the image
selection information from said storage means, and for
transmitting it to said mobile phones.

2. An image delivering system recited in claim 1,
characterized in that the image to be delivered is updated
every day.

5 3. An image delivering system recited in claim 1,
characterized in that said mobile phones have means for
transmitting information on sorts of their own phones, and
 said second server has storage means in which an image
data for every sort of the mobile phones is held, and
10 image delivering means for reading out an image data
corresponding to information on the sorts of said mobile
phones from said storage means, and transmitting it to
said mobile phones via said first server.

15 4. An image delivering system recited in claim 1,
characterized in that said first server has a table of
information on sorts of the phones, in which the intrinsic
identifiers of the mobile phones and information on sorts
of said mobile phones are described in association with
20 each other, and means for, in response to a demand from
the mobile phones, retrieving the information on the sorts
of said mobile phones from said table of information on
the sorts of the phones, based on the intrinsic
identifiers added to said demand, and for adding this
25 information on the sorts of the phones to said demand, and

transmitting it, and

said second server has storage means in which an image data for every sort of the mobile phones is held, and image delivering means for reading out an image data
5 corresponding to the information on the sorts of the phones, which is added to the demand, from said storage means, and for transmitting it to said mobile phones via said first server.

10 5. An image delivering system recited in claim 1, characterized in that said second server has an address table in which electronic mail addresses of members are described, means for concurrently transmitting electronic mails in which a destination to be linked for down-loading
15 a deliverable image data is set to addresses described in said address table, and means for responding to access based on a link from said electronic mails and transmitting the image data to said mobile phones, and

said mobile phones have electronic mail transmitting and
20 receiving means for transmitting and receiving an electronic mail, access means for receiving an electronic mail by means of said electronic mail transmitting and receiving means, and for having access to the destination to be linked, which is set in said electronic mail, image
25 display controlling means for displaying an image down-

loaded from said destination to be linked on said display means, and hold means for holding the image down-loaded from said place to be linked in a region of said storage means, to which access control is applied.

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6. An image delivering system recited in claim 5, characterized in that said mobile phones further have member registration demand means for transmitting a member registration demand of mail delivery service, electronic mail transmitting means which is started by means of said second server, and means for setting a mail address of the second server, which is provided from the second server, in a destination to which an electronic mail will be transmitted, when said electronic mail transmitting means is started, setting a mail address of a user in an origin of transmission, and setting a mail identifier provided from the second server in an electronic mail and transmitting it to a destination of transmission, and

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said second server further has means for, when receiving the member registration demand, generating a mail identifier which has a relationship in pairs with a user identifier of a member who transmitted said member registration demand, means for starting the electronic mail transmitting and receiving means of said mobile phones, and for transmitting the mail address and said

mail identifier of the second server to said mobile phones,
and means for receiving an electronic mail, specifying a
user identifier from the mail identifier that is set in
said electronic mail, and describing the specified user
5 identifier and the mail address of a user, which is set in
said electronic mail, in the address table in pairs.

7. An image delivering system having

a mobile communication network, a plurality of mobile
10 phones connected to said mobile communication network, a
first server connected to said mobile phones via said
mobile communication network, a network, and a second
server connected to said first server via said network,

characterized in that said first server has means for
15 connecting the mobile phones to said network,

said second server has storage means for holding an
image data, an address table in which electronic mail
addresses of members of image delivery service are
described, means for concurrently transmitting electronic
20 mails in which a destination to be linked for transmitting
a deliverable image data is set to addresses described in
said address table, and means for transmitting the image
data to said mobile phones based on a link that is set in
said electronic mails, and

25 said mobile phones have display means for displaying an

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image, electronic mail receiving means for receiving an
electronic mail, access means for receiving an electronic
mail by means of said electronic mail receiving means, and
for having access to a destination to be linked, which is
5 set in said electronic mail, and image display controlling
means for displaying an image down-loaded from said
destination to be linked on said display means.

8. An image delivering system recited in claim 7,
10 characterized in that the image to be delivered from the
destination to be linked is an updated image.

9. An image delivering system recited in claim 7,
characterized in that said mobile phones further have
15 member registration demand means for transmitting a member
registration demand of mail delivery service, electronic
mail transmitting means which is started by means of said
second server, and means for setting a mail address of the
second server, which is provided from the second server,
20 in a destination to which an electronic mail will be
transmitted, when said electronic mail transmitting means
is started, setting a mail address of a user in an origin
of transmission, and setting a mail identifier provided
from the second server in an electronic mail and
25 transmitting it to a destination of transmission, and

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said second server further has means for, when receiving the member registration demand, generating a mail identifier which has a relationship in pairs with a user identifier of a member who transmitted said member registration demand, means for starting the electronic mail transmitting and receiving means of said mobile phones, and for transmitting the mail address and said mail identifier of the second server to said mobile phones, and means for receiving an electronic mail, specifying a user identifier from the mail identifier that is set in said electronic mail, and describing the specified user identifier and the mail address of a user, which is set in said electronic mail, in the address table in pairs.

10. An image delivering system recited in claim 7, characterized in that said mobile phones have means for transmitting information on sorts of their own phones, and said second server has storage means in which an image data for every sort of the mobile phones is held, and image delivering means for reading out an image data corresponding to information on the sorts of said mobile phones from said storage means, and transmitting it to said mobile phones via said first server.

11. An image delivering system recited in claim 7,

characterized in that said first server has a table of information on sorts of the phones, in which intrinsic identifiers of the mobile phones and information on sorts of said mobile phones are described in association with each other, and means for, in response to a demand from the mobile phones, retrieving the information on the sorts of said mobile phones from said table of information on the sorts of the phones, based on the intrinsic identifiers added to said demand, and for adding this information on the sorts of the phones to said demand, and transmitting it, and

said second server has storage means in which an image data for every sort of the mobile phones is held, and image delivering means for reading out an image data corresponding to the information on the sorts of the phones, which is added to the demand, from said storage means, and for transmitting it to said mobile phones via said first server.

12. An image delivering system recited in claim 6, characterized in that said mobile phones have storage means having a region to which access control is applied, and hold means for holding a down-loaded image data in the region of said storage means, to which access control is applied.

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13. An image delivering method in a network system having
a mobile communication network, a plurality of mobile
phones connected to said mobile communication network, a
5 first server connected to said mobile phones via said
mobile communication network, a network, and a second
server connected to said first server via said network,
characterized in that the method has:

a step in which, in response to a request of an image
10 delivery from the mobile phones, the first server sets a
user identifier corresponding to an intrinsic identifier
of said mobile phones in said request, and transmits it to
the second server;

a step in which said second server receives the request
15 from said first server, checks right and wrong of an image
delivery based on the user identifier that is set in said
request, and transmits a requested image data to said
mobile phones if a result of the check indicates a user to
whom an image delivery may be conducted; and

20 a step in which said mobile phones receive the image
data, and hold the received image data in a storage region
to which access from a user is restricted.

14. An image delivering method recited in claim 13,
25 characterized in that the image to be delivered is updated

every day.

15. An image delivering method recited in claim 13,
characterized in that the method further has:

5 a step of holding an image data for every sort of the
mobile phones in the second server;

 a step in which, when transmitting a request, the mobile
phones add information on sorts of their own phones
thereto and transmit it; and

10 a step in which the second server delivers an image data
corresponding to the information on the sorts of said
mobile phones to the mobile phones.

16. An image delivering method recited in claim 13,
15 characterized in that the method further has:

 a step of generating a table of information on sorts of
the phones in said first server, in which the intrinsic
identifiers of the mobile phones and information on sorts
of said mobile phones are described in association with
20 each other;

 a step of holding an image data for every sort of the
mobile phones in the second server;

 a step in which, in response to a request from the
mobile phones, the first server retrieves the information
25 on the sorts of said mobile phones from said table of

information on the sorts of the phones, based on the intrinsic identifiers added to said request, and adds this information on the sorts of the phones to said demand, and transmits it to the second server; and

5 a step in which the second server delivers an image data corresponding to the information on the sorts of said mobile phones to the mobile phones based on the information on the sorts of the phones, which is added to the request.

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17. An image delivering method recited in claim 13, characterized in that the method has:

a step of providing an address table in the second server, in which electronic mail addresses of members to
15 whom electronic mails are delivered;

a step of concurrently transmitting from the second server electronic mails in which a destination to be linked for down-loading a deliverable image data is set to addresses described in said address table; and

20 a step of receiving an electronic mail, having access to the destination to be linked, which is set in the received electronic mail, down-loading an image data, and displaying an image of the down-loaded image data.

25 18. An image delivering method recited in claim 17,

characterized in that the method has:

a step in which the mobile phones transmit a
registration request of an electronic mail address;

5 a step in which the first server sets a user identifier
in said registration request;

a step in which the second server generates a
presumptive identifier which has a relationship in pairs
with said user identifier that is set in said registration
request;

10 a step of transmitting said presumptive identifier and
the electronic mail addresses of said second server to
said mobile phones, and of starting a function of an
electronic mail of said mobile phones, setting an
electronic mail address of a user in an origin of
15 transmission of an electronic mail on said mobile phones,
setting the electronic mail addresses of said second
server in a destination to which the electronic mail is
transmitted, and setting said presumptive identifier in
the electronic mail;

20 a step of transmitting said electronic mail from said
mobile phones, in which the presumptive identifier is set;

a step in which said second server extracts the
presumptive identifier from the received electronic mail,
and retrieves a user identifier which has a relationship
25 in pairs with the presumptive identifier; and

a step of registering said electronic mail address of a user, which is described in an origin of transmission of the received electronic mail, and said retrieved user identifier in the address table in pairs.

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19. An image delivering method in a network system having a mobile communication network, a plurality of mobile phones connected to said mobile communication network, a first server connected to said mobile phones via said mobile communication network, a network, and a second server connected to said first server via said network,

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characterized in that the method has:

a step of concurrently transmitting electronic mails in which a destination to be linked for down-loading an image to be delivered is set to previously registered electronic mail addresses that are destinations of the transmission;

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a step of receiving an electronic mail, and requesting to deliver an image to a destination to be linked, which is set in the electronic mail from the mobile phones, via the first server;

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a step in which, in response to a request of an image delivery from the mobile phones, the first server sets a user identifier corresponding to an intrinsic identifier of said mobile phones in said request, and transmits it to the second server;

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a step in which said second server receives the request from said first server, checks right and wrong of an image delivery based on the user identifier that is set in said request, and transmits an image data specified by the request to said mobile phones if a result of the check indicates a user to whom an image delivery may be conducted; and

a step in which said mobile phones receive the image data, and display an image of the received image data.

20. An image delivering method recited in claim 19, characterized in that the method further has a step of holding the received image data in a storage region to which access from a user is restricted.

21. An image delivering method recited in claim 19, characterized in that the image to be delivered is updated every day.

22. An image delivering method recited in claim 19, characterized in that the method further has:

a step of holding an image data for every sort of the mobile phones in the second server;

a step in which, when transmitting a request, the mobile phones add information on sorts of their own phones

thereto and transmit it; and

a step in which the second server delivers an image data corresponding to the information on the sorts of said mobile phones to the mobile phones.

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23. An image delivering method recited in claim 19, characterized in that the method further has:

10 a step of generating a table of information on sorts of the phones in said first server, in which the intrinsic identifiers of the mobile phones and information on sorts of said mobile phones are described in association with each other;

a step of holding an image data for every sort of the mobile phones in the second server;

15 a step in which, in response to a request from the mobile phones, the first server retrieves the information on the sorts of said mobile phones from said table of information on the sorts of the phones, based on the intrinsic identifiers added to said request, and adds this
20 information on the sorts of the phones to said demand, and transmits it to the second server; and

a step in which the second server delivers an image data corresponding to the information on the sorts of said mobile phones to the mobile phones based on the
25 information on the sorts of the phones, which is added to

the request.

24. An image delivering method recited in claim 19,
characterized in that the method has:

- 5 a step in which the mobile phones transmit a
registration request of an electronic mail address;
- a step in which the first server sets a user identifier
in said registration request;
- a step in which the second server generates a
10 presumptive identifier which has a relationship in pairs
with said user identifier that is set in said registration
request;
- a step of transmitting said presumptive identifier and
the electronic mail addresses of said second server to
15 said mobile phones, and of starting a function of an
electronic mail of said mobile phones, setting an
electronic mail address of a user in an origin of
transmission of an electronic mail on said mobile phones,
setting the electronic mail addresses of said second
20 server in a destination to which the electronic mail is
transmitted, and setting said presumptive identifier in
the electronic mail;
- a step of transmitting said electronic mail from said
mobile phones, in which the presumptive identifier is set;
- 25 a step in which said second server extracts the

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presumptive identifier from the received electronic mail,
and retrieves a user identifier which has a relationship
in pairs with the presumptive identifier; and

5 a step of registering said electronic mail address of a
user, which is described in an origin of transmission of
the received electronic mail, and said retrieved user
identifier in pairs.

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