Title: AN ELECTRONIC MAIL SERVICE SYSTEM COMPRISING AN INTERNET NETWORK

Abstract: An electronic mail (E-mail) service system comprising an Internet network (20), an E-mail management server (10) connected to the Internet network and for managing a registered member information database (11), a money/point database (12) and an E-mail contents database (13), and a user computer (30) having an E-mail management program (31) connected to the E-mail management server via the Internet network for forwarding or receiving E-mails. Payment means such as cash or points owned by a user is stored in the money/point database (12), and the user can attach some or all of the payment means stored in the money/point database to an E-mail and forward the resulting E-mail to another user, or recipient under control of the E-mail management server (10). As a result, the recipient can receive a predetermined amount of money or points from the user.
AN ELECTRONIC MAIL SERVICE SYSTEM COMPRISING AN INTERNET NETWORK

Technical Field

The present invention relates to an electronic mail (E-mail) service system, and more particularly, an E-mail service system which allows a user to send an E-mail attached with a payment means such as cash or points to a recipient so that the recipient can receive a predetermined amount of money or points from the user.

Background Art

Currently, the wide spread of personal computers (PCs) into companies and homes, as well as the rapid proliferation of the Internet accessible by the personal computers all over the country and the world has lead to a sharp increase in the number of E-mail users. Accordingly, the E-mail employing the personal computers and the Internet becomes a popular communication means for many people.

In particular, since the E-mail employing the personal computers and the Internet is inexpensive and can be correctly and rapidly transmitted to anyone who accesses the Internet among computer users throughout the world, it has replaced an existing postal service and a telephone service. As a result, the application and the frequency of uses of the E-mail are increasing greatly.

In the case of a general E-mail, a sender first writes a message of E-mail, and then transmits the E-mail to an E-mail address of a recipient over the Internet. Most of the E-mail messages originally included a text. But, more recently, with the development of various means and methods utilizing multimedia, different presentation modalities such as voice, and still and moving pictures can be attached along with the text to the body of the E-mail. Further, an advertisement data using text, sound or graphic images may be attached to the body thereof.

However, as the amount of E-mail traffic on the
Internet surges, more diverse requirements and associated problems arise. Particularly, in the case of associating the E-mail with a payment means, a user suffers from inconvenience in the event of using the E-mail.

That is, when a user buys goods from another user through an electronic commerce (E-commerce) on the Internet, he/she makes a payment in advance or later for the purchased goods using a credit card payment or a bank remittance.

Among such payment methods, the credit card payment method may be useful as a payment means in the case of dealing with an enterprise such as an Internet shopping mall, but cannot be used as a payment means between individuals. In addition, there has also been a problem that a member store party which provides goods or services and receives a predetermined amount of money for a provision of goods or services must pay a member store’s charge at a certain rate according to the use of a credit card. For the bank remittance method, since a user who has bought goods must pay a remittance charge to a bank, as well as having to go to the bank, which becomes burdensome.

Moreover, in the case there is needed a reply from a recipient by a request of a sender, such as a questionnaire or a public opinion poll through an E-mail, there has been a problem that although the recipient party is reluctant to make a reply if there is no reward for both the time necessary for drawing up a reply letter and a communication service charge, the sender cannot send an appropriate amount of money corresponding to the reward for the time and communication charge along with the questionnaire or the public opinion poll. Further, in the case of an advertisement by E-mail, since E-mail traffic on the Internet is very heavy, there is a need of a reward for inducing a selection of the advertisement from many recipients.

Disclosure of the Invention

Therefore, the present invention has been made in view
of the above-mentioned problems, and it is an object of the present invention to provide an E-mail service system including a payment means which allows a real-time exchange of the payment means between users to improve a rapidity of a transaction and an electronic commerce between users.

According to the present invention, there is provided an electronic mail (E-mail) service system, comprising:

an Internet network;
an E-mail management server connected to the Internet network and for managing a registered member information database being adapted to store information about E-mail users who have each subscribed as a member therein, a money/point database being adapted to store cash and points based on cash and electronic money owned currently by the E-mail users therein, and an E-mail contents database being adapted to store a variety of data including contents of E-mail messages; and

at least one user computer having an E-mail program connected to the E-mail management server via the Internet network for sending or receiving E-mails,

whereby a plurality of user computers connected to the Internet network exchange E-mails through the E-mail management server, payment means such as cash or points owned by a user is stored in the money/point database, and the user attaches some or all of the payment means stored in the money/point database to an E-mail and sends the resulting E-mail to another user, or recipient, under control of the E-mail management server, so that the recipient receives the resulting E-mail from the user and stores some of all of the payment means attached to the received E-mail in the money/point database.

Brief Description of the Drawings
The foregoing and other objects, features and advantages of the present invention will become more apparent from the following detailed description when taken in conjunction with the accompanying drawings in which:
Fig. 1 is a block diagram illustrating an E-mail service system to be implemented according to the present invention; and

Fig. 2 is a schematic view illustrating an example of an E-mail according to the present invention.

Best Mode for Carrying Out the Invention

Reference will now be made in detail to the preferred embodiments of the present invention.

Fig. 1 is a block diagram illustrating the construction of an E-mail service system to be implemented according to the present invention.

Referring to Fig. 1, there is shown an E-mail service system including an Internet network 20, an E-mail management server 10 and a user computer 30. The E-mail management server 10 is connected to the Internet network 20 and serves to manage a registered member information database 11 being adapted to store information about E-mail users who have each subscribed as a member while providing his/her own personal information therein, a money/point database 12 being adapted to store cash and points based on cash and electronic money owned currently by the E-mail users therein, and an E-mail contents database 13 being adapted to store a variety of data including contents of E-mail messages.

A user computer 30 has an E-mail program 31 connected to the E-mail management server 10 via the Internet network 20 for sending or receiving E-mails.

A payment means such as cash or points owned by a user is stored in the money/point database 12, and the user attaches some or all of the payment means stored in the money/point database to an E-mail and sends the resulting E-mail to another user, or recipient, under control of the E-mail management server 10. Then, the recipient receives the resulting E-mail from the user and stores some of all of the payment means attached to the received E-mail in the money/point database 12.
The E-mail users register as members with an E-mail service system of the present invention, and have access to the E-mail service system of the present invention by using E-mail programs 33, 41, 51, 61, 71 and 81 installed in a second user computer 32, a research institution computer 40, a hospital computer 50, a sponsor computer 60, a government and public office computer 70 and a company computer 80 connected to each other through the Internet network 20 to transmit and receive an E-mail having a payment means attached thereto.

An operation of the E-mail service system of the present invention will be described hereinafter with reference to Fig. 2.

Fig. 2 is a schematic view illustrating an example of an E-mail to be implemented according to the present invention, in which an E-mail message is written and received on a screen 100 of a user computer having an E-mail program installed therein.

As shown in Fig. 2, in the case where a user installs the E-mail program 31 in the user computer 30 and then tries to send an E-mail using the E-mail program 31, when he/she connects his/her user computer 30 to the E-mail management server 10 with his/her ID through the Internet network 20 to draw up an E-mail 101 using the E-mail program 31, he/she identifies cash and points he/she currently holds in the money/point database 12 and then adds some or all of the cash and points to a payment means 102 attached to the E-mail 101.

Then, after the drawing up of the E-mail 101 has been completed, the user enters a recipient's ID and selects a "SEND" button, and E-mail management server 10 recognizes that the E-mail 101 having a predetermined amount of money or points attached thereto is being sent to a specific other user. At this time, the specific user accesses the E-mail management server 10 through the E-mail program 33 installed in the specific user's second user computer 32 to receive the E-mail 101. Then, when the specific user identifies a
reception of the payment means 102 along with the E-mail 101, the E-mail management server 10 adds up the predetermined amount of money and points received by the specific user and stores them in the money/point database 12 for the specific user.

Also, preferably, since the E-mail management server 10 has an encryption module built therein, all the exchanged E-mails are processed by the encryption module in order to prevent fraudulent practices such as a hacking of the payment means. In addition, in consideration of security, since the E-mail of the present invention includes a payment means, E-mails are preferably transmitted/received only between registered members, if possible.

That is, an E-mail received from outside the system may be intercepted completely, or a user may receive only an E-mail sent from a specific other user who is authorized to limitedly to send an E-mail. Namely, the E-mail management server 10 can intercept unsolicited E-mails which are often called "junk e-mail" or "spam" and E-mail attached with advertisements flowing into user computers from the outside.

Various examples of using the E-mail service system of the present invention will be described in detail hereinafter.

In the case a user or a research institution which has registered as a member with the E-mail service system of the present invention conducts a questionnaire such as a public opinion poll, a functionality survey, an information survey, etc., through E-mails, the research institution can attach a predetermined amount of money or points to an E-mail including a series of items for inquiry and send the resultant questionnaire E-mail to other users or subscribers by using the E-mail program 41 through the research institution computer 40 of the research institution. At this time, the research institution immediately presents a reward for a reply to the questionnaire to the subscribers who receive the resultant questionnaire E-mail, so that a reply rate can be increased. Also, an amount of payment of the
payment means may be set differently according to a variation of the reply rate for the inquiry items so that correctness and reliability of a reply to the questionnaire are improved. Also, the users can reply to the questionnaire freely, and receive a predetermined amount of money or points corresponding to a reward for a reply to the questionnaire from the research institution if they participate in the questionnaire.

Further, in the case a user with mild illness wants a personal health care service, he/she can get a prescription and a written diagnosis without the need of a personal visit to a hospital and waiting for a long time. That is, the user receives an authorized written diagnosis by a field of medical science from a database or a corresponding homepage in the E-mail management server 10 of the E-mail service system of the present invention, or requests such an authorized written diagnosis from a specialist in charge of another hospital which has registered as a member with the E-mail service system of the present invention to receive it. After that, the user draws up a certain number of inquiry items about his/her health condition using the E-mail program 50 to complete an E-mail according to instructions of the received written diagnosis and sends the resultant E-mail attached with a payment means to the hospital computer 50 through the Internet 20 under control of the E-mail management server 10. At this time, when a specialist in charge receives the diagnosis E-mail from the user through the E-mail program 51 of the hospital computer 50, the specialist identifies the payment means attached to the received diagnosis E-mail and stores the identified payment means in the money/point database 12. After that, the specialist in charge draws up a reply to the diagnosis E-mail and returns to the user a result of the written diagnosis E-mail. That is, an exchange a diagnosis E-mail between the user and the specialist in charge is performed immediately.

Also, the user may not send the written diagnosis E-
mail attached with the payment means to the hospital computer 50, but send it to another user or a specialist designated by the E-mail management server 10. Accordingly, when the written diagnosis E-mail is stored in the E-mail contents database 13, the user can utilize the written diagnosis E-mail stored in the E-mail contents database 13 as a basic data for a case history, a treatment method and later prescriptions for the user. In particular, users send the written diagnosis E-mails to a hospital or a specialist and receives a prescription based on a result of the sent written diagnosis E-mails. Accordingly, the users does not go the hospital, but can purchase a medicine by the prescription at a drugstore near their dwelling place, which contributes to the achievement of a medicine specialization.

In a similar manner, besides a written diagnosis E-mail, also in the case of consultation E-mails associated with taxation business, law, technology, health, beauty, education, travel, hobby, etc., users can pay in advance a service charge for each consultation by sending each consultation E-mail to corresponding service providers. Accordingly, the service providers can immediately receive a payment means corresponding to the service charges from the users and store the payment means in their storage means. Only in the case where each of the service providers sends a reply including his/her service to the users, a payment of the service charges may be made for a rapid process of a transaction between the users and the service providers, if necessary. When the rapid process of the transaction is made, a service charge can be paid immediately to the service providers.

Meanwhile, in the case of an advertisement using an E-mail, a user or a sponsor which has registered as a member with the E-mail service system of the present invention can attach a predetermined amount of money or points to an E-mail including an advertisement and send the resultant advertisement E-mail to other users or subscribers by using the E-mail program 61 through the sponsor computer 60 of the
sponsor. At this time, once the subscribers receive the resultant advertisement E-mail and read a message of the received advertisement E-mail for a certain period of time, the sponsor pays a predetermined amount of money or points immediately to the users as a reward for viewing the advertisement message. Accordingly, the users may be induced to select such an advertisement E-mail, distinct from other advertisement E-mails in a flood of E-mails having advertisements attached thereto.

Also, in the case a user wants to apply to another user or a government and public office which has registered as a member with the E-mail service system of the present invention for various certificates divided through E-mails, the user receives an application form for a desired certificate from a database or a corresponding homepage in the E-mail management server 10 of the E-mail service system of the present invention. After that, the user fills in mentioned items with the E-mail program 31 installed in the user computer 30 according to the received application form and sends the resultant certificate E-mail attached with a payment means to the government and public office computer 70 through the Internet 20 under control of the E-mail management server 10. At this time, the government and public office computer 70 of the government and public office which issues a certificate receives the certificate applying E-mail from the user along with a payment means corresponding to a charge for issuing the applied certificate attached to the certificate applying E-mail. Accordingly, even a charge of a small amount of money for issuing of a certificate can be readily processed by both a certificate issuing institution and the user.

Also, in the case a user or a service providing company which has registered as a member with the E-mail service system of the present invention wants to demand a payment of a user's account, the service providing company sends a bill including administrative costs, public charges, subscription rates, etc., to users through a bill E-mail
using the E-mail program 81 of its company computer 80. Then, the users access the E-mail management server 10 to receive the bill E-mail from the service providing company, and attach a payment means such as their cash or points stored in the money/point database 12 to a reply to the bill E-mail to send the resultant E-mail to the company computer 80 of the service providing company through the E-mail management server 10. Accordingly, since the service providing company can determine whether or not the users have received the bill, there can be prevented an accident like non-arrival of a bill due to a loss or damage of an item in a general postal service, and a postal cost is reduced. Further, the E-mail management server 10 always identifies a reception of the bill E-mail so that the users can be reminded of a reception of the bill.

In addition, intimated friends or associates among members who have registered with the E-mail service system of the present invention can exchange E-mail along with cash or points, and can donate their cash or points stored in a specific institution or facilities to a third party through the E-mail without separate banking facilities.

More preferably, such an E-mail service system is associated with an electronic money system for a settlement of bills for electronic commerce (E-commerce).

That is, when the E-mail service system is associated with an electronic settlement system and an advertisement service system, the settlement of all the transactions on the Internet can be processed through one settlement scheme.

**Industrial Applicability**

As can be seen from the foregoing, according to the E-mail service system of the present invention, since a sender can send E-mail attached with a payment means to a recipient, the recipient is induced to actively participate in electronic transaction activities on the Internet, thereby maximally improving an effect and reliability of an advertisement or research through the E-mail.
Further, users can, in real time, directly, transfer a payment amount of money along with an E-mail by a payment means without using a conventional settlement means, thereby improving a rapidity of an electronic commerce.

Moreover, recipients can choose to view only an advertisement E-mail or a survey E-mail with conditions favorable to themselves from among advertisement E-mails or survey E-mails flooded on the Internet, and make a payment of a charge for provision of an electronic commerce service in real time.

While this invention has been described in connection with what is presently considered to be the most practical and preferred embodiment, it is to be understood that the invention is not limited to the disclosed embodiment, but is intended to cover various modifications, variations or equivalents within the spirit and scope of the appended claims.
Claims

1. An electronic mail (E-mail) service system, comprising:
   an Internet network;
   an E-mail management server connected to the Internet network and for managing a registered member information database being adapted to store information about E-mail users who have each subscribed as a member therein, a money/point database being adapted to store cash and points based on cash and electronic money owned currently by the E-mail users therein, and an E-mail contents database being adapted to store a variety of data including contents of E-mail messages; and
   at least one user computer having an E-mail program connected to the E-mail management server via the Internet network for sending or receiving E-mails,

   whereby a plurality of user computers connected to the Internet network exchange E-mails through the E-mail management server, payment means such as cash or points owned by a user is stored in the money/point database, and the user attaches some or all of the payment means stored in the money/point database to an E-mail and sends the resulting E-mail to another user, or recipient, under control of the E-mail management server, so that the recipient receives the resulting E-mail from the user and stores some or all of the payment means attached to the received E-mail in the money/point database.
COIN MAIL

To :
Ref. :
Title :

Hi!
To ChulSoo
I return to you the borrowed Money

Write reply letter
Cash divided bankbook
Save Delete Send

To send
Cash Point

ID POINT BANK BOOK
ID CASH BANK BOOK

Cash divided bankbook
Division
Division

1,034,500 won
356,500 won
5,700 won
27,600 won

Confirm
A. CLASSIFICATION OF SUBJECT MATTER

IPC7 H04L 12/54

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)

IPC7 H04L 12/54

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

Korean patents and applications for inventions since 1975
Korean utility models and applications for utility models since 1975

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

IEEE/IEE Electronic library (since 1988), "pay and e-mail"

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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Yamen, M.; Ballard, D.
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Further documents are listed in the continuation of Box C.

See patent family annex.

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Name and mailing address of the ISA/KR
Korean Intellectual Property Office
Government Complex-Taejon, Dunsan-dong, So-ku, Taejon Metropolitan City 302-701, Republic of Korea
Facsimile No. 82-42-472-7140

Authorized officer
KIM, Beom Yong
Telephone No. 82-42-481-5684

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## INTERNATIONAL SEARCH REPORT
Information on patent family members

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