



(22) Date de dépôt/Filing Date: 2000/03/22
(41) Mise à la disp. pub./Open to Public Insp.: 2001/07/20
(30) Priorité/Priority: 2000/01/20 (60/176,905) US

(51) Cl.Int.⁷/Int.Cl.⁷ H04L 12/16
(71) Demandeurs/Applicants:
MCLEOD, ROBERT, CA;
LIU, QI, CA
(72) Inventeurs/Inventors:
MCLEOD, ROBERT, CA;
LIU, QI, CA

(54) Titre : **MODELE ECONOMIQUE POUR MICROTRANSACTIONS SUR INTERNET AVEC PUBLICATION
AUTOMATISEE SUR INTERNET POUR LES COMMERCANTS ET COUPONNAGE ELECTRONIQUE
SECURITAIRE**
(54) Title: **A MICROTRANSACTION INTERNET ECONOMIC MODEL WITH AUTOMATED VENDOR WEB PUBLISHING
AND SECURE ELECTRONIC COUPONING**

(57) **Abrégé/Abstract:**

A microtransaction business model is disclosed. The business model is unique in that although the consumer is responsible for the making the transaction the manufacturer is responsible for the small microtransaction associated with the actual transfer of product information. The business model is counter intuitive but is the most appropriate business model for many internet based promotions and repositories. A methodology is disclosed for deploying the microtransaction on a coupon repository site and discussed in the context of related information from a recipe repository on the same or related site. The business process also describes a means for a retailer or service provider to enter promotion information in an automated manner from a standard web browser. The business model also presents a means of providing a secure coupon using encryption or a digital signature at the point of sale thereby preventing the fraudulent production of unauthorized coupons.



ABSTRACT

A microtransaction business model is disclosed. The business model is unique in that although the consumer is responsible for the making the transaction the manufacturer is responsible for the small microtransaction associated with the actual transfer of product information. The business model is counter intuitive but is the most appropriate business model for many internet based promotions and repositories. A methodology is disclosed for deploying the microtransaction on a coupon repository site and discussed in the context of related information from a recipe repository on the same or related site. The business process also describes a means for a retailer or service provider to enter promotion information in an automated manner from a standard web browser. The business model also presents a means of providing a secure coupon using encryption or a digital signature at the point of sale thereby preventing the fraudulent production of unauthorized coupons.

A microtransaction internet economic model with automated vendor web publishing and secure electronic couponing

BACKGROUND OF THE INVENTION

Field of the Invention: This invention relates to an economic model for web sites that mediate transactions between a producer and consumer. The basic model is a microtransaction model which implies that a small transaction fee is associated with the transaction. In addition, the economic or business process disclosed here illustrates the provisioning of vendor data directly by the vendor through a web interface. Furthermore a business process is disclosed for a secure electronic coupon associated with online purchasing of items such as groceries.

Description of Related Art: 1. Related art is associated with the microtransaction model whereby a user pays a small transaction fee for a service such as using a better search engine or cache utility. These systems are inherently ineffective because on the internet users are unaccustomed and unwilling to pay for these types of services when free alternatives are available. 2. Related business models for the provisioning of vendor data to a repository are usually brokered or done manually. 3. Related art associated with secure electronic coupons do not exist or have not been implemented to date.

Object and Summary of the Invention: The first object of the invention, therefore, is to describe a business model or process in which the microtransaction model is appropriate and effective. The following example illustrates the business model disclosed here. The web site is a repository of consumer product information and promotions such as coupons. The coupons are extracted by the user in a shopping cart fashion and displayed to the user in a printable manner. Once displayed and or printed, the name brand manufacturer or retailer is charged a small microtransaction fee. This scenario is exactly the opposite of that associated with a microtransaction fee whereby the user would bear the cost associated with the microtransaction. This is also different from traditional banner ads on the internet whereby a small fee is charged to the banner ad owner. If a user clicks on the banner he or she is subsequently taken to the banner ad web site. In these cases the users leaves the originating site to some extent and is not actually provided anything of value other than redirection of the user's browser to another site. For the coupon site as described in this scenario the name brand manufacturer or service provider would also have control over the number of times a particular coupon is displayed or delivered to the user community. The second object of the business process is to provide the vendor with complete control over the promotions or coupons they have in the repository. This is accomplished by allowing the vendor, producer, or service provider to enter a coupon description including, text, graphics, UPC codes, etc. in a secure manner over the Internet thereby publishing the coupon on the web server. Once on the server repository the coupon is automatically tracked, and information such as number of times viewed is presented to the coupon provider. This process provides complete control over the content and quantity of coupon related materials on the repository. Tracking of user profiles can also be used to build consumer loyalty. The third object of the invention is to provide a secure means of providing electronic coupons for name brand products and packaged goods companies. This is accomplished by encoding the coupon information such as the UPC code and/or text using an encryption technique. At the point of sale the ciphertext is decrypted allowing a confirmation of the actual coupon content.

Detailed Description: Further to the description disclosed above the prototypical microtransaction web site will be elaborated upon as follows. In addition to consumer product information the site would hold related information. For example, associated with coupons for name brand consumer products would be recipes. These recipes may be in a searchable database or categorized in some meaningful manner. Once a user searches for a recipe, he or she may decide to search the coupon repository. This can be either manual or done in an automated fashion. Once a coupon is selected, displayed and/or printed a microtransaction fee would be charged to the product manufacturer. If the recipe was supplied by the product manufacturer and selected by the user (i.e. printed) again the product manufacturer would be charged the microtransaction fee, not the user. This is a crucial aspect of this business model, the user is not charged the microtransaction but rather the producer. Here the microtransaction model is the appropriate model in terms of the value of goods, and volume. The site provides value to the user because it houses a repository of many manufacturer's products albeit each of limited value. Coupons typically are valued at less than one dollar. It is a one stop shopping experience for the coupon clipper, the manufacturer is charged a small setup/maintenance fee and subsequently charged for coupons delivered, and only charged a microtransaction fee, i.e. a few cents per transaction. A microtransaction fee can also be charged to the manufacturer as coupons are emailed to friends within the community. The email service would be used to encourage the sense of community distributing coupons or promotions among friends and family.

In the business process described here the provisioning of coupons to the site is done by the vendor. The vendor logs onto the site and enters product information, such as the UPC code, the graphic of the product, and text information such as quantity limits, closing dates, and redemption information. This information is checked and confirmed and subsequently published on the coupon repository. As the site described here also includes a recipe section a product vendor would also be allowed to publish recipes in a similar manner. In both cases the microtransaction revenue model could be applied. In the case where a third party posted a recipe which precipitated a search of the coupon repository, the third party may then be entitled to a secondary microtransaction. All of the above would take place in an automated albeit edited mechanism.

The coupon site is not the only instantiation of the upside down microtransaction model. In addition a set-up fee may be added or a contract may be associated with site affiliation and other services such as automated tracking. These however do not detract from the basic revenue model. The model is effective from the perspective of the consumer as well as the retailer as it allows for an economy of scale.

The second aspect of the business process is allowing the vendor, retailer, service provider, or packaged goods manufacturer to publish their own content on the repository. This is done through a standard template or form from a standard web browser. The retailer would be given an account allowing the publishing of an agreed upon number of coupons. The content and quantity would be under the control of the retailer. In the case of a retailer a UPC code may be generated automatically if required. These coupons would then be uploaded into the database and subsequently made available to the user community. The user would then print the coupons that he or she were interested in and redeem them at the vendor at the time of purchase. The business process described here has several key advantages over alternative approaches. These advantages

include the ability of the retailer to publish content from anywhere and at anytime from a standard Internet browser. No special software is required by the retailer. The retailer may also make the most use of the as the promotions or offers can be changed as frequently as required by the retailer.

The third aspect of the business process concerns the manufacturers of packaged goods. These name brand companies are concerned with image quality, redemption at the point of sale, control, and redemption of coupons by the retailers themselves. The current model of most name brand coupons is through high quality print and mass distribution, redemption at point of sale by the consumer, and subsequently sent by the retailer to a clearing center. The manufacturer stipulates certain conditions such as reasonable sale volumes at the point of sale as part of the terms associated with final redemption between the retailer and manufacturer. The model described here addresses issues associated with fraud and validation through the use of encryption and is most easily described in the context of an online sale for items such as groceries. In the case of an online grocery store, the consumer builds a shopping cart of items in an analogous manner to shopping in a bricks and mortar store. Once at check out the consumer is presented with the total and a means of payment and delivery confirmed. In our model the retailer would also have a means of enquiring if the consumer had any coupons he or she would like to apply to the items being purchased. Coupons collected at our site would then be transferred to the retailer site and deducted from the bill. The coupons would provide UPC code information and a ciphertext or digital signature. The digital signature is one-way hash function (a function that is easy to compute but for which it is computationally infeasible to forge for a given piece of data such as a coupon, thereby making it nearly impossible to forge). Once at the retailer, the retailer could add sale verification information and send this either directly to the manufacturer or a redemption clearing center online. This service could also be provided by the coupon repository site. The coupon repository site can also serve as the point of contact or redirection to the online grocery. In this manner the packaged goods company has the additional advantage of displaying their product prior to redirection to the online grocery.

Since there are many modifications that can be made in the business model as described herein, as well as many different arrangements of the same within the spirit and scope of the invention, it is intended that all matter contained in the specification be interpreted as illustrative only.

What we claim is:

1. A novel economic model for web based transactions whereby a consumer receives something of value and the manufacturer covers the microtransaction fee.
2. A novel means of publishing coupon data by the retailer or manufacturer.
3. A means whereby the vendor or service provider publishes their content using an Internet browser to a database which is also accessible by the general public using an Internet browser.
4. A means by which the general public has read only permission to the database.
5. A means by which as retailer has read and write permissions making it possible for the retailer to modify their content as desired.
6. A means by which a number of retailers share a common database each with their own user data storage area.
7. A novel means of secure coupon management and redemption using digital signatures.
8. A means by which a large number of retailers share a common access point to a repository of coupon or promotion content over the Internet.