PORTABLE REWARD CHECKOUT, REWARD MANAGEMENT AND REWARD REDEMPTION SYSTEM AND METHOD


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BACKGROUND OF THE INVENTION

Field of the Invention

The present invention relates to a portable reward checkout, reward management and reward redemption system and method thereof. More particularly, the present invention relates to a portable system and method of redeeming reward points for rewards, services or goods from a secure centralized data processing and storage facility over a wired or wireless network.

Description of the Related Art

Retailers and manufacturers have implemented loyalty programs that offer a variety of rewards to customers as an incentive for attracting a customer to do business with the retailer, and to encourage the customer to continue purchasing the retailer's services or goods. Traditionally, retailers reward customers by issuing reward points for each transaction made by the customer. In some conventional systems, a receipt or voucher is printed in connection with each transaction, informing the customer of accumulated or earned reward points. Some retailers inform their customers of accumulated reward points through direct mail, i.e., monthly billing statements. Consequently, if the customer sporadically wants to check the customer's account for the balance of accumulated reward points, the customer must directly contact the retailer over the telephone, in person, or the like.

Expensive brochures are printed and mailed to customers informing the

customer on how to redeem the reward points, and of what are the particular rewards for which the customer qualifies. In order to receive the reward, the customer must contact the retailer over the telephone or the like, identify himself and request a voucher for the reward, if a voucher was not presented to the customer during the customer's visit. The voucher, which is subsequently printed and mailed, must be presented at a retail or sales outlet to redeem the reward points and receive the reward.

Alternatively, many retailers issue smart cards that store the customer's accumulated reward points. In order to check the balance of the accumulated reward points stored to the customer's smart card, the customer must take the smart card to the retailer that issued the smart card. Correspondingly, to receive the reward, the customer must take the smart card to a retail or sales outlet to redeem the reward points stored to the smart card.

U.S. Patent No. 6,138,911, issued on October 31, 2000 to Fredregill et al., describes an in-store points redemption system and method. The disclosed computer implemented customer transaction point accumulation system is one in which a customer immediately earns and accumulates points for immediate use during transactions at participating retailer outlets. Terminals at the retailer outlet can transmit a customer's identification number to a host database, and invoke any of several transactions. The host database stores customer records, which include a customer's remaining reward points or balance of points accumulated or earned. The terminal may add points to the database, when the customer engages in an activity that generates points, e.g., makes a purchase. The terminal also may be used to redeem points for a reward. Given this capability, the system can automatically determine the points awarded for each transaction made during the customer's visit to the retailer outlet, and can even determine whether an item purchased is a redeemable item for which the points may be redeemed for a reduction of the price. The customer's remaining reward points are printed on a receipt to be used at a later time. The system immediately updates the customer's record by adding

points rewarded or subtracting points redeemed from the customer's balance of remaining reward points, and prints the updated information on a receipt.

U.S. Patent No. 6,129,274, issued on October 10, 2000 to Suzuki, concerns a system and method for updating a customer's shopping transaction history using an electronic personal digital shopping assistant. The electronic personal shopping system communicates between a customer's personal smart card and a point-to-sale terminal in a retail outlet. Demographic data, customer's transaction history data and customer's current incentive indicia are stored in particular locations in a memory of the smart card. Checkout terminals record a customer's most recent transactions in the customer's transaction history storage area and update the customer's current incentive indicia to reflect the most recent purchase. Promotional and personalized greeting messages are developed by reading and analyzing the demographic profile, transaction history and incentive indicia information stored in the smart card to personalize the service offered to each individual customer.

U.S. Patent No. 6,070,147, issued on May 30, 2000 to Harms et al., is directed to a customer identification and marketing analysis system and method. The system administers a loyalty-marketing program by using a predetermined identification card as a frequent buyer redemption card. Encoded data stored to the frequent buyer redemption card is used to access third party databases to gather information or demographic information about a customer. Incentives are awarded to the customer based on the demographic information.

In the prior art systems, informing the customer about customer activity including the customer's remaining reward points via direct mail or at a point-of-sale terminal, informing the customer on how to redeem the reward points through direct mail, and updating the customer's account can be expensive and time consuming. Moreover, checking the balance of the customer's remaining reward points via the telephone or at a point-of-sale terminal, and redeeming the customer's accumulated reward points for a particular reward in person at a

retail outlet can also be time consuming.

SUMMARY OF THE INVENTION

Accordingly, it is an object of the present invention to overcome the disadvantages of the prior art, and to provide a portable reward checkout, reward management and reward redemption system and method that is secure, cost effective and user-friendly.

It is another object of the present invention to inform customers through faster and inexpensive means such as wired or wireless mediums, which convey information in real time, about customer activity and instructions on how to redeem the customer's accumulated reward points.

It is still a further object of the present invention to make the redeeming process efficient and inexpensive by allowing customers to checkout a selected quantity of portable reward points using a portable device and have the selected quantity of reward points sent from a secure centralized data processing and storage facility to the portable device for subsequent redemption or transfer over a wired or wireless network at a centralized or distributed rewards distribution facility.

It is yet a further object of the present invention to allow customers to redeposit in the customer's account at a centralized data processing and storage center, or transfer to other users, all or a selected quantity of portable reward points using a portable device.

It is yet a further object of the present invention to efficiently manage the customer's account stored in a secure centralized data processing and storage facility, to permit automatic verification of accumulated the reward points, and to permit remote transactions that update the reward points in a customer's account.

Accordingly, to achieve the above objects, there is provided a portable system for redeeming reward points for rewards, services or goods that includes at least one distribution facility, one centralized data processing and storage facility, plural card member devices and plural retailer devices. The distribution facility has a redeeming interface, and an organization database coupled to the redeeming interface. The distribution facility communicates with at least the centralized data processing and storage facility and the plural card member devices over a wireless or wired network and is operative to issue, redeem, receive, and/or save reward points. The card member device includes a card member interface operative to allow a customer verified as an authorized user to receive, store, transfer, exchange, return or redeem reward points over a wireless or wired network. Further, the centralized data processing and storage facility, including a management interface communicatively coupled to the card member interface and the redeeming interface, and a rewards database coupled to the management interface, is operative to receive, store or forward accumulated and earned rewarding points over a wireless or wired network. The centralized data processing and storage facility manages the overall system.

In one mode of operation, a method of redeeming reward points for rewards, services or goods using a card member device includes a sequence for advising a customer of accumulated reward points, comprising the steps of (a) initiating from the card member device a connection to a centralized data processing and storage facility by a customer, (b) verifying that the customer is an authorized user using stored data in the centralized data processing and storage facility, and (c) sending information to the card member device regarding the balance of the reward points stored in the centralized data processing and storage facility to the customer verified as the authorized user.

The method further includes a sequence for redeeming accumulated reward points, comprising the steps of (d) requesting via the card member device all or

a selected quantity of the reward points, (e) sending from a centralized data processing and storage facility the selected quantity of the reward points to the card member device and receiving and storing the transmitted points in the card member device, (f) sending an acknowledgment from the card member device to the centralized data processing and storage facility advising of the receipt of the requested reward points, and (g) in response to the receipt of the acknowledgment, updating the centralized data processing and storage facility to reflect the remaining balance of the reward points. The redemption sequence also includes the steps of (h) sending from the card member device to a distribution center a selected quantity of the reward points to request selected rewards, services or goods, (i) sending an acknowledgment from the distribution center to the card member device and the centralized data processing and storage facility of the receipt of the received selected quantity of the reward points and processing the reward request for delivery of the requested reward. Finally, (j) in response to the receipt of the acknowledgment, updating the card member device and the centralized data processing and storage facility to reflect the remaining balance of the reward points, and (k) storing the updated balance of the remaining reward points in the centralized data processing and storage facility.

In an integrated mode of operation, a method of redeeming reward points for rewards, services or goods using a card member device includes a sequence for advising a customer of accumulated reward points, comprising the steps of (a) initiating from the card member device an electronic connection to a centralized data processing and storage facility by a customer, (b) verifying that the customer is an authorized user using stored data in the centralized data processing and storage facility, and (c) electronically sending information to the card member device regarding the balance of the reward points stored in the centralized data processing and storage facility to the customer verified as the authorized user. Further, the method includes a sequence for redeeming accumulated reward points, comprising the steps of (d) electronically requesting via the card member device all or a selected quantity of the reward points, (e)

electronically sending from a centralized data processing and storage facility the selected quantity of the reward points to the card member device, and (f) electronically sending an acknowledgment from the card member device to the centralized data processing and storage facility advising of the receipt of the requested reward points. Also included in the redemption sequence are the steps of (g) in response to the receipt of the acknowledgment, updating the centralized data processing and storage facility to reflect the remaining balance of the reward points, (h) electronically sending from the card member device to a distribution center the selected quantity of the reward points to request selected rewards, services or goods, and (i) electronically sending an acknowledgment from the distribution center to the card member device of the receipt of the received selected quantity of the reward points. Lastly, (j) in response to the receipt of the acknowledgment, updating the card member device and the centralized data processing and storage facility to reflect the remaining balance of the reward points, and (k) storing the updated balance of the remaining reward points in the centralized data processing and storage facility.

In another alternate mode of operation, a method of redeeming reward points for rewards, services or goods using a card member device, comprising the steps of (a) initiating from a card member device a connection to a centralized data processing and storage facility by a customer, (b) verifying that the customer is an authorized user using stored data in the centralized data processing and storage facility, and (c) transferring via the card member device stored reward points to a participating user's card member device.

In yet another mode of operation, a method of redeeming reward points for rewards, services or goods using a card member device, comprising the steps of (a) initiating from a card member device a connection to a centralized data processing and storage facility by a customer, (b) verifying that the customer is an authorized user using stored data in the centralized data processing and

storage facility, and (c) returning said reward points via the card member device to the centralized data processing and storage facility.

In yet another mode of operation, a method of managing reward points for rewards, services or goods using a card member device, comprising the steps of (a) initiating from a card member device a connection to a centralized data processing and storage facility by a customer, (b) verifying that the user is an authorized user using stored data in the centralized data processing and storage facility, and (c) transferring at said verified user's request a selected number of reward points from the user's account to another user's account via a communication from the card member device to the centralized data processing and storage facility.

In yet another mode, a method of redeeming reward points for rewards, services or goods using a card member device, comprising the steps of (a) initiating from a card member device a connection to a centralized data processing and storage facility by a customer, (b) verifying that the customer is an authorized user using stored data in the centralized data processing and storage facility, and (c) sending via the card member device said selected quantity of said reward points to said distribution center to redeem said reward, service or good.

BRIEF DESCRIPTION OF THE DRAWINGS

The above objectives and advantages of the present invention will become more apparent by describing in detail preferred embodiments thereof with reference to the attached drawings in which:

FIG. 1 is an overview diagram showing the various functional blocks of a portable reward checkout, reward management and reward redemption system in accordance with the present invention;

FIG. 2 is a diagram illustrating the card member device of the portable reward checkout, reward management and reward redemption system of FIG. 1;

FIG. 3 is a diagram illustrating the centralized data processing and storage facility of the portable reward checkout, reward management and reward redemption system of FIG. 1;

FIG. 4 is a diagram illustrating the distribution center of the portable reward checkout, reward management and reward redemption system of FIG. 1;

FIGS. 5-7 are illustrations of the sequences for initiating a connection via the card member device to the centralized data processing and storage facility;

FIG. 8 is diagram illustrating the sequences for advising the user via the card member device of information regarding accumulated or earned reward points and account activity;

FIG. 9 is a diagram showing the sequences for downloading reward points from the centralized data processing and storage facility, and redeeming the reward points from the distribution center; and

FIGS. 10A through 10C are flow charts depicting the logical flow of the portable reward checkout, reward management and reward redemption system in accordance with the principles of the present invention.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring to FIG. 1, the system 1 includes a card member device 10, one or more distribution facilities 20 (only one rewards redeeming center is shown), and a centralized data processing and storage facility (rewards management system) 30. The card member device has a card member interface 11, including a processor, and a memory 12. The distribution facility has a

redeeming interface 22, including a processor, an organization device 21, and an organization database 23 coupled to the redeeming interface 22. The centralized data processing and storage facility 30 includes a management interface 32, including a processor, and a rewards database 31. The card member device 10, the distribution facilities 20 and the centralized data processing and storage facility 30 communicate with each other via a wired and/or wireless communications network 100.

In a virtual sales and reward system, virtual advertisements (vAds) promoting goods or services are delivered across wired or wireless networks to the card member device 10. vAds can be delivered to the card member device 10 as an electronic mail (email) attachment. The customer can browse the vAd for information regarding the goods or services, and can purchase desired goods or request desired services over the Internet or the like via the card member device 10 linked to the vAd.

vAds can be delivered to the card member device 10 by an outdoor interactive billboard that is compatible with the system. The outdoor interactive billboard can be implemented with a wireless transceiver, i.e., Bluetooth transceiver, to make the billboard interactive with the card member device 10. The billboard can display specific recommendations for food, shopping, products and services, retailer's address, phone numbers and directions, or the like. The customer can download the information from the billboard to the customer's card member device 10, and purchase the goods or request the services over the Internet or the like.

vAds can also be downloaded from one card member device to another card member device which are compatible with each other, i.e., Bluetooth enabled personal computer, PDA, interactive television, cellular or mobile phone, home appliances, or the like. vAds can also be added to a wish list or stored in the memory 12 of the card member device 10 to be accessed at a later time.

The customer can order desired goods or services via the card member device electronically, can order the goods or services via telephone, or can visit a retailer to view the goods or discuss the services before making a purchase in a conventional manner. In either case, when the customer purchases goods or requests services from a participating retailer, the retailer issues reward points or virtual rewards (vRewards) to the customer at its own facility (acting as a distribution facility) or via a centralized distribution facility 20. vReward is a compact wireless object exchange format developed by Kent Ridge Digital Labs. vRewards use compact certificates which are compact to fit into mobile devices. A format for the vReward can be:

| Begin VREWARD

| ISSUER: AMEX {Plain Text}

| ISSUE DATE:ddmmyyyyhhmmss {Date Month Year Hour Minute Second}

| EXPIRY DATE:ddmmyyyyhhmmss

| USE:SINGLE or Multiple {Single for one time use and multiple for multi use coupons}

| VALUE: NUMBER{Float} //Value of the coupon

| CURRENCY: USD {Standard 3 letter code}

| MERCHANTS: NTUC:COLDSTORAGE {Merchants where the coupon can be redeemed}

| SIGNATURE:HEX DIGIT { Signature generated from all the above field}

| END VREWARDS

The vRewards are provided to a retailer or a centralized distribution facility for storage in an organization database 23, and the organization device may be operative to distribute the vRewards to a customer at the time of a reward-generating transaction. The vReward can be provided directly to a card member device or to the customer account in the centralized processing and storage facility 30. Issued reward points or vRewards are stored in the customer's rewards data base account.

FIG. 2 provides a schematic illustration of the card member device 10 of the portable reward checkout, reward management and reward redemption system of FIG. 1. The card member interface 11 of the card member device 10 allows the customer to interact with the system 1 in an easy and convenient way. The card member interface 11 depends on the type and capability of the card member device. The card member device 10 can be a personal computer, personal digital assistant (PDA), interactive television, cellular or mobile phone, home appliances, or the like. In addition, the card member interface 11 depends on the type of connection used, i.e., wireless or wired. Wireless connections can include, for example, SMS, WAP, Bluetooth or IRDA. The customer, via the card member interface 11, can request a connection to the centralized data processing and storage facility 30 to request information about the customer's account. This can be done easily by providing a hardwired or virtual button on the card member device 10 to command a connection to a website of the centralized data processing and storage facility 30 or a dedicated rewards system network.

After the connection is established electronically and the customer is verified as being an authorized user, via the entry of login information at a login menu, information regarding the balance of the user's reward points can be forwarded electronically via the centralized data processing and storage facility 30 to the card member device 10. Information explaining how to redeem the reward points and rewards for which the user qualifies can also be forwarded

electronically to the card member device 10. The user can request electronically, using the card member device 10, a selected quantity of reward points to be sent to the card member device 10 from the rewards database 31 of the centralized data processing and storage facility 30. The quantity can include all or a specified number of the customer's accumulated or earned reward points. The selected quantity of reward points are forwarded electronically to the card member device 10 from the centralized data processing and storage facility 30, and the user can store the reward points in the memory 12 of the card member device 10.

Once the user receives the requested quantity of reward points in the card member device 10 from the centralized data processing and storage facility 30, the user can perform various operations. The user can redeem the requested quantity of reward points for a reward or discounts on services or goods by sending the reward points to the distribution facility 20 or to a participating retailer 40 (which also may serve as a distribution facility). The user can be required to use all of the stored reward points at one time or can be permitted to transmit only a selected portion of the stored reward points and save the remainder in the card member device for subsequent transactions.

Further, the user can redeem the reward points in several transactions to request multiple rewards, services or goods from the distribution facility 20. For example, the user via the card member device 10 can forward consecutively, from the selected quantity of reward points, a specific amount of reward points that is required for a first particular reward, forward a specific amount of reward points that is required for a second particular reward, and forward the remaining reward points for a discount to any distribution facility 20 or participating retailer 40.

In addition, the user can exchange a first type of reward points on the card device 10 for a second type of reward points having a different value or utility (e.g., to take advantage of a current promotion or sale). In addition, a user can

return stored reward points to the centralized data processing and storage facility 30, if desired. This is advantageous because the user may have multiple card devices 10, may wish to securely store the remaining points to preclude their loss in the event that the card member device 10 is lost, stolen, damaged, or the like.

The user, via the card member device 10, can also transfer a specified quantity of reward points to other participating users. Likewise, those other participating users can store the reward points in their card member device, redeem the reward points and forward them to a distribution facility to request a reward or discount on services or goods, perform several transactions using the reward points, or return the reward points to their account in the centralized data processing and storage facility 30.

With reference to FIG. 3, the centralized data processing and storage facility 30 communicates via the management interface 32 with the card member device 10 and the distribution center 20 for managing the system. The generic management interface 32 is defined so that the system 1 can connect to multiple organization databases 23 of the distribution facilities 20 or retailers 40. Accordingly, the data processing and storage facility 30 is capable of interacting with a single or multiple retailers or distribution facilities. The management interface 32 can also provide participating retailers with a single access point for the retailer's access to reward points for distribution to the retailer's customers via a retailer's organization databases 23. Access to customer accounts stored in the centralized data processing and storage facility 30 is only available to the retailers when redeeming reward points.

Further, the centralized data processing and storage facility 30 can interface with the retailer's organization databases 23 to update the user's account, following the grant of reward points to a user as a result of a sale or other promotion. The centralized data processing and storage facility 30 can also connect to multiple card member devices 10, which may be any of a plurality of

types, i.e., personal computer, personal digital assistant (PDA), interactive television, cellular or mobile phone, home appliances, or the like. All such communications with the centralized data processing and storage facility 30 can be conducted over wired and wireless networks.

The rewards database 31 of the centralized data processing and storage facility 30 includes a user identification database 33 and a customer activity database 34. The user identification database 33 stores information regarding prior activity of a customer or identifying data used to establish a connection to the webpage of the centralized data processing and storage facility 30. The customer activity database 34 stores all information relating to a customer's account. Such information may include total reward points issued by each participating retailer, reward points accumulated or earned, requested reward points, balances of reward points during and after transactions, transferred reward points, retailers' activities, or the like. The storage facility may also include other data bases related to the transactions of retailers or distribution facilities, as would be apparent to one skilled in the art.

The centralized data processing and storage facility 30 includes a processor and software that can authenticate users by verifying information stored in the user identification database 33 of the rewards database 31, and send secure, time sensitive, non-reproducible, electronic reward points to the card member device 10 when requested by the authorized user. The centralized data processing and storage facility 30 can also send information on how to redeem the reward points and of what are the particular rewards for which the customer qualifies. The centralized data processing and storage facility 30 is capable of interacting with a single user or multiple users, and a single or multiple retailers and distribution facilities. The centralized data processing and storage facility 30 may allow a user to return reward points, and may allow a user to exchange or transfer reward points with other participating users. That facility also may process any participant's historical or current activity data, in order to provide analyses or reports.

When the centralized data processing and storage facility 30 sends requested reward points to the card member device 10, the customer's activity database 34 is updated to reflect the transactions, i.e., reward points are subtracted or deducted. Similarly, when the user returns reward points to the centralized data processing and storage facility 30, the customer's activity database is updated to reflect the transaction, i.e., reward points are added.

In addition, when the user exchanges or transfers reward points with other participating users, the customer's activity database 34 and the other participating user's activity database 34 is updated, i.e., reward points are subtracted from the sender and reward points are added to the recipient. Further, if a reward, service or good is returned by the customer to the distribution facility 20 or a retailer 40 because of a defect or dissatisfaction with the reward, good or service, and after the distribution facility 20 or retailer 40 receives the returned item and informs the centralized data processing and storage facility 30, the customer's activity database 34 is updated to reflect the returned reward points, i.e., reward points are added.

As noted with regard to Fig. 1, while only one central distribution facility is shown, there may be one or more distribution facilities, and in one variation of the proposed system, all or selected retailers may act as a distribution facility. Referring to FIG. 4, the distribution facility 20 communicates with the card member device 10 and the centralized data processing and storage facility 30. The redeeming interface 22 of the distribution facility 20 is capable of communicating over wireless networks or the Internet with the user device 10 and the processing and storage facility 30.

The organization device 21 exists at a participating retailer's site and/or the distribution facility 20, depending on the system architecture and organization. Participating retailers can store reward points authorized by the central processing and storage facility 30 and can issue an individual customer reward

points from their organization devices 21. As shown in Fig. 4, the organizing device is located in a distribution facility 20, but also would be located in participating retail sites 40. Accordingly, a participating retailer can issue a plurality of participating users reward points from their organization device 21 by accessing the points stored or saved in the retailer's organization database 23. A similar arrangement can exist at the distribution facility 20.

The distribution facility 20 can connect to different card member devices, i.e., personal computer, personal digital assistant (PDA), interactive television, cellular or mobile phone, home appliances, or the like. Moreover, the distribution facility 20, which includes a processor and software, can also, with permission of the customer, connect to the centralized data processing and storage facility 30 and request reward points for a customer. This may be advantageous for when a retailer inadvertently deletes or cancels a customer's reward points from the retailer's organization database 23, a system failure at the retailer's site, or the like.

When the customer forwards the reward points to the distribution facility 20 to redeem a reward for a service or good, or redeems the reward points at a retailer for a discount, goods or services, the reward points are deducted from the customer's account stored in the customer's activity database 34). If a reward is ordered, the selected reward is forwarded, or a service certificate or actual service is provided to the customer. Participating retailers serving as or networking with a distribution facility 20 can forward the selected rewards and goods, or provide services. Having participating retailers redeem the reward points for a selected reward, service or good encourages the customer to continue business with the participating retailers. Alternatively, an outlet/warehouse connected to the communication network 100 can be dedicated to redeeming reward points and sending rewards or goods, or providing services.

When the distribution facility 20 (or retailer) sends the selected reward, service

or good, a virtual receipt (vReceipt) can be forwarded to the user to inform the user of the status of the shipment and to track the shipment. vReceipt is a compact wireless object exchange format developed by Kent Ridge Digital Labs. A format for the vReceipt can be:

| Begin VRECEIPT

| MERCHANT: Kent Ridge Digital Pte Ltd //Name of the merchant

| PCODE: XYZ123 //Product or service code

| PRICE: NUMBER {Float} //Price of the product

| CURRENCY: USD {Standard 3 letter code}

| PORDER: 5672452 //Purchase order number

| M_ADDRESS: 21, Heng Mui Keng Terrace //Merchant's address

| PAYMENT_TYPE: Credit card

| CARD_TYPE: //Credit card type

| CARD_NO: //Credit card number

| REF_NO: //Transaction reference number

| TERMINAL_ID: //Transaction Id

| SIGNATURE: HEX DIGIT //Merchant's digital signature

| STATUS: SHIPPED // Shipped, Delivered, On transit etc.

| END VRECEIPT

The centralized data processing and storage facility 30 or the distribution center 20 can update the vReceipt once the distribution facility 20 confirms the shipment of the reward, service or good. The customer via the card member device 10 can check the delivery status of the requested reward, service or good using the vReceipt.

FIGS. 5-7 are illustrations of the sequences for initiating a connection via the card member device 10 to the centralized data processing and storage facility 30. Referring now to FIG. 5, a customer can initiate a connection to a webpage of the centralized data processing and storage facility 30 by pressing a button on the card member device 10, or connecting through a menu in a SIM toolkit through a SMS bearer 303. The request is made via the card member interface 11 of the card member device 10 to the management interface 32 of the centralized data processing and storage facility 30, which can be a WAP/SMS gateway 301 and application proxy 302 (FIG. 6). To establish a connection, information regarding prior interaction by the customer or identifying data stored in the rewards database 31 of the centralized data processing and storage facility 30 is verified. The information or identifying data may include the customer's telephone number, serial number, previously exchanged key, previous transaction, or the like.

After a connection is established (FIG. 7), a user login menu can be sent to the card member device 10, where the customer can enter a login name at the login identifier and a password at a password prompt. Alternatively, based on the user's prior interaction, the login identifier can be predetermined, requiring only a password entry at the password prompt by the user. For convenience, the user can elect to save the user's login name, and enter only a password at the password prompt of the user login menu. The login information is sent to the centralized data processing and storage facility 30 via the card member

device 10. The centralized data processing and storage facility 30 can verify the login information entered by the customer, and determine whether the user is an authorized user.

FIG. 8 is a diagram illustrating the sequences for advising the user via the card member device 10 of information regarding accumulated or earned reward points and account activity. Referring to FIG. 8, after the customer is determined by the centralized data processing and storage facility 30 as being an authorized user, information regarding the balance of the user's reward points and instructions on how to redeem the reward points can be sent to the card member device 10. The user can request via the card member device 10 additional information regarding the rewards, and the centralized data processing and storage facility 30 can send the user the requested information.

FIG. 9 is a diagram showing the sequences for downloading reward points from the centralized data processing and storage facility 30, and redeeming the reward points from the distribution facility 20. Referring to FIG. 9, the user can request via the card member device 10 to have a selected quantity of reward points downloaded. The centralized data processing and storage facility 30 can verify if the requested reward points have been accumulated or earned by verifying the customer's account in the rewards database 31. If the reward points have been accumulated, the centralized data processing and storage facility 30 can send the requested reward points to the card member device 10.

Once the user receives the downloaded reward points in the card member device 10, the user can perform various operations. The user can redeem the requested quantity of reward points for a reward, service or good by sending the reward points to the distribution center 20. Once the centralized data processing and storage facility 30 downloads the requested quantity of reward points, the user acknowledges via the card member device 10 receipt of the requested reward points. In response of the receipt, the centralized data processing and storage facility 30 is updated, i.e., points are subtracted, to

reflect the remaining balance of the reward points in the customer's activity database 34.

The user can send the selected quantity of rewards via the card member device 10 to the distribution facility 20 (including a retailer 40) for redemption. Then, the distribution facility 20 can send an acknowledgement of receipt to the card member device 10 and a notification to the centralized data processing and storage facility 30 that the forwarded reward points have been received by the facility 20. The card member device 10 is updated to reflect the reward points, i.e., reward points are deducted. The notice forwarded to the centralized data processing and storage facility 30 confirms the delivery of the reward points from the card member device 10 to the distribution facility 20, and the appropriate balance of reward points are saved in the customer's activity database 34 of the centralized data processing and storage facility 30.

If the distribution facility 20 has acknowledged receipt of the forwarded reward points from the card member device 10 and later determines that the requested reward, service or good is not available, the distribution facility 20 can return the reward points to the centralized data processing and storage facility 30 and advise the card member device accordingly. The centralized data processing and storage facility 30 can store the updated balance in the customer's activity database 34. The returned reward points can be available for redemption, transfer, exchange, or the like.

Similarly, if the user receives the requested reward, service or good and is not satisfied, the user can return the item. The distribution facility 20 can acknowledge receipt of the returned item and return the reward points to the centralized data processing and storage facility 30. Again, the card member device 10 can receive a notice of that return or, if it receives returned points directly, it can store the returned reward points in the memory 12. In either case, the centralized data processing and storage facility 30 can store the updated information in the customer's activity database 34. The returned

reward points can be available for redemption, transfer, exchange, or the like.

Once the reward points have been downloaded and acknowledged by the centralized data processing and storage facility 30, the user can redeem the reward points in several transactions to request multiple rewards, services or goods from a distribution facility 20. The user via the card member device 10 can forward from the selected quantity of reward points a specific amount of reward points that is required for a particular reward. Each time the card member device 10 forwards a selected quantity of reward points to the distribution center 20, the card member device 10 and the centralized data processing and storage facility 30 receive acknowledgements from the distribution facility 20 and are updated. After the last transaction, the balance of the reward points is saved in the customer's activity database 34 of the centralized data processing and storage facility 30.

In addition, once the reward points have been downloaded and acknowledged by the centralized data processing and storage facility 30, if the user later decides to empty the card device 10 or return stored reward points to the centralized data processing and storage facility 30, the user can forward the reward points to the centralized data processing and storage facility 30. The centralized data processing and storage facility 30 can acknowledge receipt of the returned reward points and the card member device 10 is updated, i.e., points are deducted. The centralized data processing and storage facility 30 is also updated, i.e., points are added, and the new balance is stored in the customer activity database 34 of the centralized data processing and storage facility 30.

If the user via the card member device 10 exchanges the downloaded points for another type of points having different value or function, or transfers the downloaded quantity of reward points to other participating users, the card member device 10 is updated, i.e., points are deducted., and the participating user's customer activity database 34 is updated, i.e., reward points are added.

At this time, the participating user can store the complimentary reward points in their card member device 10, redeem the reward points and forward them to the distribution facility 20 to request a reward, service or good, perform several transactions using the reward points, or return the reward points to the centralized data processing and storage facility 30.

FIGS. 10A through 10C are flowcharts depicting the logical flow of the portable reward checkout, reward management and reward redemption system in accordance with FIG. 1. According to an initiation sequence, in step S1, a customer initiates a connection from the card member device 10 to the centralized data processing and storage facility 30. Information regarding prior interaction by the customer or identifying data stored in the rewards database 31 is verified to determine the connection in step S2. If the stored information is not verified, the connection is rejected (step S3). If the stored information is verified, a user login menu is sent to the card member device 10 (step S4).

The user enters the login information via the card member device 10 and sends the login information to the centralized data processing and storage facility 30 in step S5. If the login information is not valid, the connection is rejected in step S7. On the other hand, if the login information is valid, the user is queried whether the user wants information regarding the balance of the user's reward points in step S8. If the user does not want information regarding the user's balance, the user can proceed to redeem the reward points (step $S9_a$), end the connection (step $S9_b$), or empty or return the reward points to the centralized data processing and storage facility 30 or transfer the reward points to another participating user's card member device 10 (step $S9_c$) The user could even exchange the downloaded points for another type of points having different value or function If the user wants information regarding the balance of the user's reward points, the rewards database 31 of the centralized data processing and storage facility 30 is queried (step S10), and the information regarding the balance of the user's reward points is forwarded to the card member device 10 (step S11). Information explaining how to redeem the

reward points and rewards that the user qualifies for is also sent to the card member device 10.

In a redemption sequence, as illustrated in Fig. 10B, the user is queried whether the user wants to download or redeem all accumulated or earned reward points in step S12. If the user does not want to download all the user's reward points and decides to redeem a selected quantity, the user enters the quantity to be redeemed in step S13. The centralized data processing and storage facility 30 verifies that the user has accumulated the requested amount of reward points by checking the user's account and balance in the rewards database 31. If the user has earned the requested amount of reward points stored in the rewards database 31, the selected quantity of reward points are sent to the card member device 10 (step S14). If the user does not have the selected quantity of reward points, information regarding the user's reward points is sent to the user and the user is restarted to step S10.

In step S15, an acknowledgment is sent from the card member device 10 to the centralized data processing and storage facility 30 acknowledging receipt of the requested reward points. In response to the receipt of the acknowledgment, the centralized data processing and storage facility 30 immediately updates the rewards database 31 to reflect the remaining balance of the user's reward points after the amount of requested points has been deducted (step S16). In step S17, the user is queried whether the user wants to redeem the requested quantity of reward points. If the user decides not to redeem the requested quantity of reward points, the user can store the requested quantity of reward points in the memory 12 of the card member device 10 to be used at a later time (step S18), and the connection ends in step S19. If the user decides to redeem the requested quantity of reward points, via the card member device 10, the user sends the reward points to the distribution facility 20 in step S20 requesting a reward or discount.

An acknowledgment is sent from the distribution facility 20 to the card member

device 10 acknowledging receipt of the received reward points and to the centralized data processing and storage facility 30 confirming the receipt of the reward points (step S21). In response to the receipt of the acknowledgment, the card member device 10 and the centralized data processing and storage facility 30 are immediately updated to reflect the remaining balance of the reward points in step S22. The updated balance of the remaining reward points is stored in the rewards database 31 of the centralized data processing and storage facility 30 (step S23), and the connection ends (step S24).

Having described the invention in detail and by reference to the drawings, it will be apparent that modification and variations are possible without departing from the scope of the invention. Therefore, it is intended that the invention not be limited by the precise structure shown and described, but rather the full scope of the invention as defined in the following claims.

What is claimed is:

1.A portable system for redeeming reward points for rewards, comprising:

at least one distribution facility including a redeeming interface operative to transmit and receive reward points information over a wireless or wired network and operative to process rewards related transactions including at least the issue, redemption, saving and returning of the reward points;

at least one card member device including a card member interface operative to provide a verified and authorized user with the capability to receive, store, transfer, exchange or redeem the reward points and information related thereto over a wireless or wired network; and

a centralized data processing and storage facility comprising a management interface adapted to be communicatively coupled to the card member interface and the redeeming interface for transmission and reception of rewards information over a wireless or wired network and adapted to process rewards related transactions including at least the receipt, processing and storage of reward points.

2.The system according to claim 1, wherein the card member device is operative to initiate an authorized connection to the centralized data processing and storage facility for purposes of account balance inquiry and/or redemption.

3.The system according to claim 2, wherein the centralized data processing and storage facility is operative to verify that the user is authorized to access stored data in the reward database.

4.The system according to claim 3, wherein the centralized data processing and storage facility is operative to send information to the card member device regarding the balance of the reward points stored in the reward database.

5.The system according to claim 4, wherein the card member device is operative to request a selected quantity of the reward points from the centralized data processing and storage facility.

6.The system according to claim 5, wherein the centralized data processing and storage facility is operative to determine if the user is entitled to receive the selected quantity of reward points and, if so, to send the selected quantity of the reward points to the card member device.

7.The system according to claim 6, wherein the card member device is operative to send an acknowledgment to the centralized data processing and storage facility of the receipt of the requested quantity reward points.

8.The system according to claim 7, wherein the centralized data processing and storage facility is operative to immediately update the rewards database to reflect the balance of remaining reward points, in response to the receipt of the acknowledgment.

9.The system according to claim 8, wherein the card member device is operative to send a selected quantity of the reward points stored in the card member device to the distribution center to redeem a reward, service or good.

10.The system according to claim 9, wherein the distribution center is operative to send an acknowledgment to the card member device and a notification to the centralized data processing and storage facility of the receipt of the received selected quantity of the reward points.

11.The system according to claim 10, wherein the card member device and the centralized data processing and storage facility are operative to immediately update a stored remaining balance of reward points, in response to the receipt of the acknowledgment.

12.The system according to claim 11, wherein the centralized data processing and storage facility stores the updated balance of the remaining reward points in the rewards database.

13.The system according to claim 6, wherein the card member device comprises a processor and a memory for managing and storing information bout the users reward points.

14.The system according to claim 1, wherein the card member device, the distribution center and the centralized data processing and storage facility each comprise means for communicating via a communications network.

15.The system according to claim 1, further comprising a retailer facility operative to issue to a customer reward points.

16.The system according to claim 15, wherein said retailer facility is operative to communicate with the centralized data processing center and provide information with regard to the awarding of reward points to a user.

17.The system according to claim 1, wherein the card member device communicates with the centralized data processing and storage facility using at least one of SMS, WAP, IRDA or Bluetooth.

18.The system according to claim 1, wherein the card member device communicates with the centralized data processing and storage facility and the distribution facility over the Internet.

19.The system according to claim 1, wherein a plurality of customers can network with the centralized data processing and storage facility.

20.The system according to claim 1, wherein the card member device comprises at least one of a mobile phone, a personal computer, a personal digital assistant, home appliance or an interactive television.

21.The system according to claim 6, wherein the card member device is operative to transfer the reward points to another participating user.

22.The system according to claim 6, wherein the card member device is operative to return a selected number of stored reward points to the centralized data processing and storage facility and deduct the selected number of returned reward points from card member device storage.

23.The system according to claim 3, wherein the card member device is operative to transfer the reward points to another participating user.

24.The system according to claim 3, wherein the card member device is operative to return the reward points to the centralized data processing and storage facility.

25.The system according to claim 3, wherein the card member device is operative to send the selected quantity of the reward points to the distribution center to redeem the reward, service or good.

26.The system according to claim 3, wherein the card member device is operative to exchange a selected quantity of a first type of reward points for a second type of reward points by communication with the central processing and storage facility.

27. The system according to any one of the preceding claims comprising two distribution facilities wherein reward points issued by one distribution facility is redeemable at the other facility.

28.A method of redeeming reward points for rewards, services or goods using a card member device, comprising the steps of:

(a) initiating from the card member device a connection to a centralized data processing and storage facility by a customer;

(b) verifying that the customer is an authorized user using stored data in the centralized data processing and storage facility;

(c) sending information to the card member device regarding the balance of the reward points stored in the centralized data processing and storage facility to the customer verified as the authorized user;

(d) requesting via the card member device a selected quantity of the reward points;

(e) sending from a centralized data processing and storage facility the selected quantity of the reward points to the card member device;

(f) sending an acknowledgment from the card member device to the centralized data processing and storage facility advising of the receipt of the requested reward points;

(g) updating the centralized data processing and storage facility to reflect the remaining balance of the reward points;

(h) sending from the card member device to a distribution center a selected quantity of the reward points to request selected rewards, services or goods;

(i) sending an acknowledgment from the distribution center to the card member device and the centralized data processing and storage facility of the receipt of the received selected quantity of the reward points;

(j)updating the card member device and the centralized data processing and storage facility to reflect the remaining balance of the reward points; and

(k) storing the updated balance of the remaining reward points in the centralized data processing and storage facility.

29.The method according to claim 28, wherein the verifying step comprises submission of a valid password, and authorization of the user to receive a menu to download the reward points.

30.The method according to claim 28, wherein step (c) includes sending the authorized user information on how to redeem the reward points.

31.A method of redeeming reward points for rewards, services or goods using a card member device, comprising the steps of:

(a) initiating from the card member device an electronic connection to a centralized data processing and storage facility by a customer;

(b) verifying that the customer is an authorized user;

(c) electronically sending from the centralized data processing and storage facility to the card member device information regarding the balance of the reward points stored in the centralized data processing and storage facility for a customer verified as the authorized user;

(d) electronically requesting via the card member device a selected quantity of the reward points;

(e) electronically sending from the centralized data processing and storage

facility the selected quantity of the reward points to the card member device and receiving the sent quantity of reward points;

(f) electronically sending an acknowledgment from the card member device to the centralized data processing and storage facility advising of the receipt of the requested reward points and storing the sent quantity of reward points in the card member device.

32.The method of claim 31 further comprising:

(g) in response to the receipt of the acknowledgment, updating the centralized data processing and storage facility to reflect the remaining balance of the reward points.

33.The method according to claim 31, wherein in step (b), the stored data comprises at least one of a telephone number, a serial number, a previous transaction or a previous key entry.

34.The method according to claim 31, wherein in step (b), when the user is verified, the user receives a login menu.

35.The method according to claim 34, wherein the user enters at least a user password in the login menu.

36.The method according to claim 35, wherein if the user password is not valid, the connection is rejected.

37.The method according to claim 36, wherein if the user password is valid, the user receives a menu to download the reward points.

38.The method according to claim 31, wherein step (c) includes sending the authorized user information on how to redeem the reward points.

39.A method of redeeming reward points for rewards, services or goods using a card member device, comprising the steps of:

(a) initiating from a card member device a connection to a centralized data processing and storage facility by a customer;

(b) verifying that the customer is an authorized user using stored data in the centralized data processing and storage facility; and

(c) transferring via the card member device stored reward points to a participating user's card member device.

40.The method according to claim 39, further comprising the steps of:

(d) storing the updated balance of the remaining reward points in the centralized data processing and storage facility for both the recipient of the transferred reward points, and the sender of the reward points

41.A method of redeeming reward points for rewards, services or goods using a card member device, comprising the steps of:

(a) initiating from a card member device a connection to a centralized data processing and storage facility by a customer;

(b) verifying that the customer is an authorized user using stored data in the centralized data processing and storage facility; and

(c) sending via the card member device the selected quantity of the reward points to the distribution center to redeem the reward, services or goods.

42.The method according to claim 41, further comprising the steps of:

(d) sending an acknowledgment from the distribution center to the card member device and the centralized data processing and storage facility of the receipt of the received selected quantity of the reward points;

(e) in response to the receipt of the acknowledgment, updating the card member device and the centralized data processing and storage facility to reflect the remaining balance of the reward points; and

(f) storing the updated balance of the remaining reward points in the centralized data processing and storage facility.

43.The method of redeeming reward points stored in a card member device for rewards, services or goods using a card member device, comprising the steps of:

(a) electronically sending from the card member device to a distribution center the selected quantity of the reward points to request selected rewards, services or goods;

(b) electronically sending an acknowledgment from the distribution center to the card member device and a centralized data processing and storage facility of the receipt of the received selected quantity of the reward points;

(c) in response to the receipt of the acknowledgment, updating the information stored in the card member device and the centralized data processing and storage facility to reflect the remaining balance of the reward points; and

(d) storing the updated balance of the remaining reward points in the centralized data processing and storage facility.