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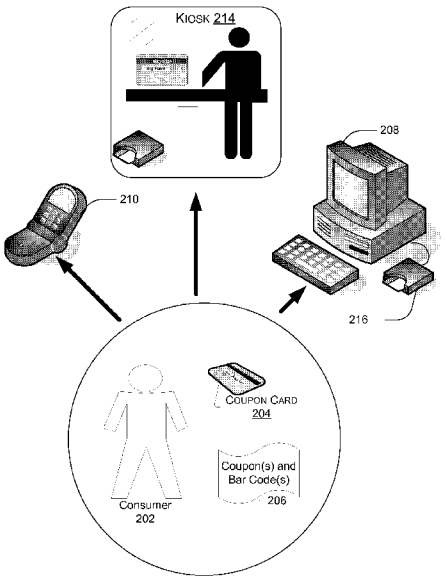
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[Continued on next page]

(54) Title: COUPON CARD METHODS AND SYSTEMS

FIG. 2 BOX 2-US



(57) Abstract: A sponsored portable coupon payment device is disclosed with methods and systems for its provision and use in an open payment transaction processing system. The open payment transaction processing system includes issuers of accounts to the sponsors, merchants accepting transactions on the accounts, and acquirers for the merchants. A transaction handler in the open payment transaction processing system facilitates between the issuers and the acquirers, at least in part, authorization of the transactions, and clearing and settlement of the transactions.

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COUPON CARD METHODS AND SYSTEMS

CROSS-REFERENCE TO RELATED APPLICATIONS

This PCT Application claims priority to the following six (6) US Patent Applications, each of which is incorporated herein by reference: (i) U.S. Patent Application Serial No. 12/545,372, filed on August 21, 2009, by Karen Cervenka, titled Free Sample Coupon Card; (ii) U.S. Patent Application Serial No. 12/480,268, filed on June 8, 2009, by Karen Cervenka, titled Coupon Card Generation Web Service; (iii) U.S. Patent Application Serial No. 12/480,346, filed on June 8, 2009, by Karen Cervenka, titled Dual Range Cellular Telephone Coupon Card Generation; (iv) U.S. Patent Application Serial No. 12/480,444, filed on June 8, 2009, by Karen Cervenka, titled Coupon Card Kiosk; (v) U.S. Patent Application Serial No. 12/480,529, filed on June 8, 2009, by Karen Cervenka, titled Coupon Card Point Of Service Terminal Processing; and (vi) U.S. Patent Application Serial No. 12/480,551, filed on June 8, 2009, by Karen Cervenka, titled Transaction Handler Merchant Reimbursement For Consumer Transaction Use Of Sponsor Discount Coupon Card. Each of the foregoing utility applications is incorporated herein by reference.

FIELD

The present invention is related to a transaction between a merchant and a consumer, is more particularly related to a discount on such a transaction, and is most particularly related to a coupon being presented by the consumer to the merchant to obtain the discount on the transaction.

BACKGROUND

Consumers obtain paper coupons in a variety of ways. They may cut them out of a newspaper or receive them at a Point of Service (POS) terminal when making a purchase. Sometimes paper coupons are mailed to consumers by the sponsor of the coupon or other entity. Each of these distribution methods, however, are associated recurring costs. Every time a manufacturer or merchant decides to offer a paper coupon they must pay to have them printed and distributed.

Moreover, paper coupons are cumbersome and easily lost. Many consumers spend valuable time clipping the paper coupons they want from newspapers. Those who use a large number of paper coupons often spend additional time sorting the coupons into categories so that a particular coupon is easier to find. Further, customers will often receive the paper coupon some time before they intend to use it. The consumer must then store the paper coupon until they go shopping.

Additionally, consumers may not receive paper coupons for specific items they buy even though the coupons are available from a manufacturer or merchant. The consumer may not be on the mailing list to receive the coupon or it may not have been printed in the newspaper they buy. In some cases this may cause the consumer to forego purchasing a specific item in favor of a less costly alternative.

Thus, there is a need for a system that reduces the costs incurred by merchants and manufacturers in offering coupons as well as one that allows consumers to be able to quickly find and obtain the coupons they want.

SUMMARY

Disclosed implementations include a portable coupon payment device having a substrate in contact with memory having encoded data corresponding to a free sample and quantity thereof, as well as an identifier for a sponsor of the free sample who will reimburse a merchant for the cost of the free sample donated to a consumer presenting the portable coupon payment device to the merchant.

In another implementation, a method is presented where, at a web service, a electronic coupon is selected from a database received from a web browser. The electronic coupon is associated with the account of the electronic coupon sponsor and is receivable by a merchant for a discount which is debited from the sponsor's account and credited to the merchant's account. A specification is then received that includes the rendering capability of the client, a type of portable coupon device associated with a consumer account and acceptable as payment for a future purchase, and an identifier of the consumer account. Next, a rendering image, a location to store the discount information in the memory of the type of the portable coupon device, and the discount information is retrieved from the database. Finally, the web browser transmits, via the web service, the rendering image, memory location, and discount information.

In yet another implementation an article of manufacture is presented comprising a computer readable medium comprising computer readable program code disposed therein. The computer readable program code comprises a series of computer readable program steps to effect receiving, at a web service, a selection of an electronic coupon from a database from a web browser. The electronic coupon is associated with the account of the electronic coupon sponsor and is receivable by a merchant for a discount which is debited from the sponsor's account and credited to the merchant's account. The computer readable program code further comprises a series of computer readable program steps to effect receiving a specification that includes the rendering capability of the client, a type of portable coupon device associated with a consumer account and acceptable as payment for a future purchase, and an identifier of the consumer

account. The computer readable program code additionally comprises a series of computer readable program steps to effect retrieving from the database a rendering image, a location to store the discount information in the memory of the type of the portable coupon device, and the discount information, as well as transmitting, via the web service, the rendering image, memory location, and discount information.

In yet another implementation, an apparatus is presented that includes a web service, a database, and a means for transmitting to a web browser, via the web service, a rendering image, a memory location, and discount information. The web service is capable of receiving a selection from the web browser of an electronic coupon from the data base and a specification. The electronic coupon is associated with a sponsor account and is receivable by a merchant for a discount which is debited from the sponsor's account and credited to the merchant's account. The specification includes the rendering capability of the client, a type of portable coupon device associated with a consumer account and acceptable as payment for a future purchase, and an identifier of the consumer account. The database includes the rendering image, the memory location, and the discount information.

In yet another implementation, a method for use in a payment processing network is provided. The method includes browsing, using a cellular telephony capability of a web enabled client (.e.g., a web enabled cell phone), via a browser to an Internet website in communication with a web service having a database storing multiple electronic coupons. Each electronic coupon is associated with an account of the electronic coupon's sponsor and is receivable by a merchant for a discount on a purchase, where the discount is debited from the sponsor's account and credited to the merchant's to reimburse the merchant. Next, using the cellular telephony capability of the web enabled client, the browser sends a user's selection of an electronic coupon and a specification. The specification includes the rendering capability of the web enabled client to render a soft copy of the electronic coupon on a display, the type of a portable coupon device being used, and an identifier for the consumer account associated with the portable coupon device. The browser then receives, using the cellular telephony capability of the web enabled client, a rendering image, the location at which to store the discount information in memory of the portable coupon device, and the discount information. The discount information includes identifiers for the sponsor account, the discount amount, and the purchase that is eligible for the discount. Finally, using the near field communication capability of the web enabled client, the discount information is written to the specified location in the memory of the portable coupon device.

In yet another implementation, a web enabled client is presented. The web enabled client includes a browser for browsing to a website, a means for sending from the browser, a means for receiving at the browser, and a means for writing to a portable coupon card. The website is in communication with a web service having a database storing electronic coupons. Each electronic coupon is associated with the account of the electronic coupon's sponsor and is receivable by a merchant for a discount on a purchase, where the discount is debited from the sponsor's account and credited to the merchant's to reimburse the merchant.

In yet another implementation, a method for use in a payment processing network is presented. The method includes providing a portable coupon device for reading by a point of service terminal, where the portable coupon device is associated with a consumer account and has an electronic coupon stored in memory. The electronic coupon is associated with the account of the electronic coupon's sponsor and is receivable by a merchant for a discount on a purchase, where the discount is debited from the sponsor's account and credited to the merchant's to reimburse the merchant. Also stored in memory is discount information which includes identifiers for the sponsor's account, a discount amount, and the purchase that is eligible for the discount. The memory of the portable coupon device presented is to be read, thereby providing the point of service terminal with sufficient information to start the process of debiting the consumer account for the price of the purchase less the discount amount, debiting the sponsor's account for the discount amount, and crediting the merchant's account with the discount amount.

In yet another implementation, a method for providing an electronic coupon to a user of a kiosk is disclosed. The method includes receiving, via an input device of a user interface, a selection of an electronic coupon from a database. Each electronic coupon in the database is associated with a sponsor account issued to a sponsor of the discount by an issuer and can be used to receive a discount on a purchase from a merchant, where the discount is debited from the sponsor's account and credited to the merchant's. From the database, the kiosk then retrieves a rendering image corresponding to the rendering capabilities of the kiosk and a memory location to store the discount information in the memory of a type of portable coupon device stored within the kiosk, and the discount information. The discount information includes identifiers for the sponsor's account, the discount amount, and the purchase eligible for the discount. The discount information is written to the memory location of the portable coupon device. The portable coupon device is dispensed to the user. A hard copy of the rendering image is also rendered (i.e., printed on paper) and dispensed to the user.

In yet another implementation, a kiosk is presented. The kiosk includes a user interface, an input device, a means for retrieving, a means for writing, a means for dispensing, and a means

for rendering. The user interface is capable of displaying an electronic coupon from a database, where each electronic coupon is associated with a sponsor account issued to a sponsor of the discount by an issuer and can be used to receive a discount on a purchase from a merchant, where the discount is debited from the sponsor's account and credited to the merchant's. The means for retrieving retrieves from the database a rendering image corresponding to the rendering capabilities of the kiosk, a memory location to store discount information in the memory of the portable coupon device, and the discount information, which includes identifiers for the sponsor's account, a discount amount, and the purchase eligible for the discount.

In yet another implementation, a method of using a kiosk to obtain a portable coupon card having an electronic coupon stored thereon is presented. The method includes selecting, using an input device of a user interface, an electronic coupon from a database. Each electronic coupon is associated with a sponsor account issued to a sponsor of the discount by an issuer and can be used to receive a discount on a purchase from a merchant, where the discount is debited from the sponsor's account and credited to the merchant's. Next, from the kiosk, a portable coupon device and a hard copy of a rendering image is received. The portable coupon device has discount information stored in memory which includes identifiers for the sponsor's account, a discount amount, and the purchase that is eligible for the discount.

In yet another implementation, a method of using a point of service terminal (POS) to provide a discount on a purchase is presented. The method includes receiving a portable coupon device that is associated with a consumer account. Stored in the memory of the portable coupon device is an electronic coupon associated with a sponsor account issued to a sponsor of a discount and which is receivable by a merchant for a discount on a purchase, the discount being debited from the sponsor's account. The portable coupon card additionally has the discount information stored in memory, which includes identifiers for the sponsor's account, the discount amount, and the purchase eligible for the discount. The method further includes reading the discount information from the portable coupon card and forming a transmission addressed to an acquirer requesting authorization of the electronic coupon. Next, an authorization response is received from the acquirer and, if it includes an approval of the electronic coupon, the discount is applied to the cost of the purchase and payment for the cost of the purchase less the discount amount is accepted.

In yet another implementation, an article of manufacture comprising a computer readable medium comprising computer readable program code disposed thereon to provide a discount on an eligible good or service to a consumer is presented. The computer readable program code includes a series of computer readable program steps to effect electronically receiving a portable

coupon device that is associated with a consumer account, reading the discount information from the memory of the portable coupon device, electronically forming a transmission addressed to the acquirer requesting authorization of an electronic coupon stored in the memory of the portable coupon device, electronically receiving an authorization response, and, if it includes an approval of the electronic coupon, electronically applying the discount to the purchase and electronically accepting payment for the purchase less the discount amount. The electronic coupon is associated with a sponsor account issued to a sponsor of the discount and is receivable by a merchant for a discount on a purchase, the discount being debited from the sponsor's account.

In yet another implementation, a computer program product encoded in a computer readable medium and useable with a programmable computer processor to provide a discount on an eligible good or service to a consumer, the computer program product comprising computer readable program code which causes the programmable process to electronically receive a portable coupon device that is associated with a consumer account, electronically read the discount information from the memory of the portable coupon device, electronically form a transmission addressed to the acquirer requesting authorization of an electronic coupon stored in the memory of the portable coupon device, electronically receive an authorization response, and, if it includes an approval of the electronic coupon, electronically apply the discount to the purchase and electronically accept payment for the purchase less the discount amount. The electronic coupon is associated with a sponsor account issued to a sponsor of the discount and is receivable by a merchant for a discount on a purchase, the discount being debited from the sponsor's account.

In yet another implementation, an article of manufacture comprising a computer readable medium having computer readable program code is presented. The computer readable code, when executed by an electronic computing apparatus, performs the method of electronically receiving a first authorization request for the application of a discount associated with an electronic coupon stored on a portable coupon device. The electronic coupon is associated with a sponsor account and is receivable by a merchant for a discount on a purchase. The discount is to be debited from the sponsor's account and credited to the merchants. The article of manufacture further comprises computer readable code to electronically send the first authorization request to the issuer of the sponsor's account, electronically receive an authorization response, and electronically send the authorization response to the acquirer. If the authorization response includes an approval of the application of the discount to the transaction,

the computer readable code additionally electronically sends a payment request to the issuer of the sponsor's account to debit the sponsor's account for the discount amount.

In yet another implementation, a portable coupon device is presented. The portable coupon device stores at least one electronic coupon that is valid after a sponsor submits a payment that is credited to the sponsor's account for payment of a discount. Each electronic coupon identifies the sponsor's account and stores electronically readable information sufficient for a merchant to request authorization of the discount from the issuer of the sponsor's account, where the discount is to be debited from the sponsor's account and credited to the merchant's. The portable coupon device additionally stores the discount information, which includes identifiers for the sponsor's account, a discount amount, and the purchase that is eligible for the discount. The portable coupon device is acceptable for a future transaction involving the purchase.

In yet another implementation, a computer program product encoded in a computer readable medium and useable with a programmable computer processor to provide a discount on an eligible good or service to a consumer is presented. The computer program product includes computer readable program code which causes the programmable process to electronically receive a first authorization request for the application of a discount associated with an electronic coupon stored on a portable coupon device. The electronic coupon is associated with a sponsor account and is receivable by a merchant for a discount on a purchase. The discount is to be debited from the sponsor's account and credited to the merchants. a computer program product further comprises computer readable program code which causes the programmable process to electronically send the first authorization request to the issuer of the sponsor's account, electronically receive an authorization response, and electronically send the authorization response to the acquirer. If the authorization response includes an approval of the application of the discount to the transaction, computer readable program code additionally causes the programmable process to electronically send a payment request to the issuer of the sponsor's account to debit the sponsor's account for the discount amount.

The foregoing advantages of the inventions will appear in the detailed description that follows. In the description, reference is made to the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

Implementations of the invention will become more apparent from the detailed description set forth below when taken in conjunction with the drawings.

Figure 1-US illustrates an exemplary payment processing network, depicting the general environment where an coupon card may be used by a card holder to obtain a discount on a purchase;

Figure 2-US depicts a block diagram of a method of using a kiosk to obtain a coupon card associated with an electronic coupon;

Figure 3-US illustrates possible alternative implementations of the data encoding area of a coupon card;

Figure 4-US depicts the environment within Figure 1-US where a coupon card is used by a consumer to obtain a discount on a purchase;

Figure 5-US depicts a flow chart of an exemplary method used by a POS terminal to process an electronic coupon stored on a coupon card;

Figure 2-US1 depicts the environment within Figure 1-US where a consumer selects electronic coupons for storage on a coupon card and uses the coupon card to obtain a discount on a purchase;

Figure 3-US1 presents a flowchart of an exemplary method used by a personal computing system to provide a consumer with a coupon card having an electronic coupon stored thereon;

Figure 2-US2 depicts the environment within Figure 1-US where a consumer selects electronic coupons for storage on a coupon card using a cellular telephone and uses the coupon card to obtain a discount on a purchase;

Figure 3-US2 illustrates an exemplary cellular phone capable of being used within the environment depicted in Figure 2-US2;

Figure 2-US3 depicts a block diagram of a method of using a kiosk to obtain a coupon card associated with an electronic coupon;

Figure 3-US3 depicts a flow chart of an exemplary method used by a kiosk to provide a coupon card having an electronic coupon stored thereon to a consumer;

Figure 5-US3 depicts the environment within Figure 1-US where a coupon card is used by a consumer to obtain a discount on a purchase;

Figure 2-US4 depicts a block diagram of a method of using a kiosk to obtain a coupon card associated with an electronic coupon;

Figure 4-US4 depicts the environment within Figure 1-US where a coupon card is used by a consumer to obtain a discount on a purchase;

Figure 5-US4 depicts a flow chart of an exemplary method used by a POS terminal to process an electronic coupon stored on a coupon card;

Figure 2-US5 depicts a block diagram of a method of using a kiosk to obtain a coupon card associated with an electronic coupon;

Figure 4-US5 depicts the environment within Figure 1-US where a coupon card is used by a consumer to obtain a discount on a purchase; and

Figure 5-US5 depicts a flow chart of an exemplary method used by a POS terminal to process an electronic coupon stored on a coupon card.

DETAILED DESCRIPTION

The present discussion considers a coupon card and methods for its use in a payment processing system that processes electronic coupons stored on the coupon card. In the present context, an account for the payment of future discounts on goods and services attributable to the use of electronic coupons is issued by the issuer to a third-party and credited with funds submitted by the third-party. The funds are for reimbursement of discounts on the sale of goods and services given by a merchant upon the presentation of a coupon card having at least one of the electronic coupons stored thereon.

In one implementation, a portable coupon payment device is presented. The portable coupon payment device includes a substrate having surface with an image rendering thereon that corresponds to a free sample. The portable coupon payment device also has memory, in contact with the substrate, having data encoded therein including (i) an identifier for the free sample, (ii) a quantity for the free sample; (iii) a sponsor company account for a selling merchant to charge the cost of the free sample for payment to a selling merchant account to reimburse the selling merchant for the free sample; (iv) an image corresponding to the free sample; and (v) an identifier for a coupon provider donating the free sample to a consumer.

In another implementation, a portable coupon transaction payment device is presented. The portable coupon transaction payment device has memory embedded in a substrate. Stored in the memory are an identifier and a quantity for each of a plurality of a free sample donated by a coupon provider to a consumer and a non-sample item each being offered by a corresponding coupon provider to the consumer. Also stored, for each free sample, is a sponsor company account for a selling merchant to charge the cost of the free sample for payment to a selling merchant account to reimburse the selling merchant for the free sample. Also stored is an identifier for the consumer. Also stored, is an identifier for each coupon provider. Also stored is an identifier for a consumer account issued by an issuer to the consumer. Also stored is an identifier to correlate which donation for the consumer was donated by which coupon provider. The sponsor company account and the consumer account are each an account in a payment

processing network by which a consumer can engage in a plurality of transactions on the account with a plurality of merchants in the payment processing network. The payment processing network includes a plurality of merchants and consumers engaging in the plurality of transactions on a plurality of respective accounts that respective issuers issue to the consumers. Each transaction involves the merchant submitting the transaction to an acquirer for processing by a transaction handler who requests the issuer to obtain payment for the transaction from the account, wherein the issuer forwards the payment to the transaction handler who forwards the payment to the acquirer to reimburse the merchant for the transaction. The portable coupon transaction payment device also includes means for providing access to the information in the memory.

In yet another implementation, a portable coupon transaction payment device is presented. The portable coupon transaction payment device has memory embedded in a substrate. The memory has information stored therein. The substrate has an image on a surface thereof that includes a representation of at least a portion of the information in the memory for being read by the image being scanned by a scanner at a Point of Service terminal. The stored information includes (i) an identifier and a quantity for each of a plurality of a free sample donated by a coupon provider to a consumer and a non-sample item offered by a corresponding coupon provider to the consumer; (ii) an image, having multiple portion, of each donation for the consumer that was donated by the corresponding coupon provider, wherein the portions of the image correspond to the identifier for the consumer, the identifier for the coupon provider; the identifier and the quantity for the free sample; and the identifier and the quantity for the non-sample item; (iii) for each free sample, a sponsor company account for a selling merchant to charge the cost of the free sample for payment to a selling merchant account to reimburse the selling merchant for the free sample; and (iv) an identifier to correlate which donation for the consumer was donated by which coupon provider. The sponsor company account and the consumer account are each an account in a payment processing network by which a consumer can engage in a plurality of transactions on the account with a plurality of merchants in the payment processing network. The payment processing network includes a plurality of merchants and consumers engaging in the plurality of transactions on a plurality of respective accounts that respective issuers issue to the consumers. Each transaction involves the merchant submitting the transaction to an acquirer for processing by a transaction handler who requests the issuer to obtain payment for the transaction from the account, wherein the issuer forwards the payment to the transaction handler who forwards the payment to the acquirer to reimburse the merchant for

the transaction. The portable coupon transaction payment device also has means for providing access to the information in the memory.

In alternatives to the foregoing implementations, the memory can be a non-volatile memory of a semiconductor device, a magnetic encoded data region of a magnetic stripe, or a combination of the foregoing. The substrate can be a portion of a consumer transaction payment card (e.g.. a smart card having a Radio Frequency Identification (RFID) tag, a transponder device and a microchip, a magstripe card, or a combination of the foregoing. The portable coupon transaction payment device can include circuitry and corresponding firmware, as would be understood by those of skill in the relevant arts, for the memory to receive the information by a wireless communication, a hardwired communication, or a magnetic encoded communication for track data received by modifying the magnetism of magnetic particles on a band of magnetic material on the portable coupon payment device. For each image of each donation, the identifier for the coupon provider can be a handwritten signature of the coupon provider. Alternatively, for each image of each free sample, the free sample in the image can be hand written by the coupon provider.

Implementation A: Figures 1-US, 2-US, 3-US, 4-US, and 5-US.

In one implementation, a portable coupon payment device includes a substrate having surface with an image rendering thereon that corresponds to a free sample. The portable coupon payment device also has memory, in contact with the substrate, having data encoded therein including (i) an identifier for the free sample, (ii) a quantity for the free sample; (iii) a sponsor company account for a selling merchant to charge the cost of the free sample for payment to a selling merchant account to reimburse the selling merchant for the free sample; (iv) an image corresponding to the free sample; and (v) an identifier for a coupon provider donating the free sample to a consumer.

Within the exemplary payment processing system depicted in FIG. 1-US, discussed in detail below, FIG. 2-US illustrates a block diagram depicting a consumer's exemplary use of a kiosk that associates a coupon card with at least one electronic coupon that the consumer has selected, by use of the kiosk, that may be used to obtain a discount on the purchase of goods and services by the consumer from a merchant. Although the implementation is discussed in regards to a substantially planar laminated card, one skilled in the art will recognize that other forms of transaction tokens (i.e., portable consumer payment devices) could be used in the disclosed method.

In the illustrated implementation of FIG. 2-US, consumer 202 may associate a coupon card 204 with at least one electronic coupon using several methods. In one implementation,

consumer 202 uses a web-enabled computer system 208 to connect to the World Wide Web, the Internet, or other network, and browse to a website having electronic coupons available for downloading as facilitated by a web service . In such an implementation, consumer 202 uses the browser to select at least one of the electronic coupons offered. Information relating to that electronic coupon is then downloaded to computer system 208, including an account identifier for the party offering, and willing to pay for the discount provide by, the electronic coupon.

In certain implementations, the information further includes the type of product or service, or category thereof, for which the electronic coupon is valid. By way of example and not limitation, the electronic coupon may be valid for all cleaning products made by a particular manufacturer. Alternatively, the electronic coupon may be valid for a specific dish soap made by the manufacturer.

In other implementations, the information also includes a merchant or manufacturer with which the electronic coupon is valid. In such an implementation, the electronic coupon may only be valid for use with a particular merchant or only for the purchase of a particular manufacturer's product. In other implementations, the information includes an expiration date, after which the electronic coupon is no longer valid. In yet other implementations, the information includes the number of goods or services eligible for a discount using the electronic coupon. By way of example and not limitation, the electronic coupon may be valid for discounts on up to three (3) bottles of a pain reliever. Alternatively, the electronic coupon may only be used when ten (10) car washes are purchased at the same time.

In certain implementations, the information also includes a bar code identifying the item or type of item for which the electronic coupon is valid. In such an implementation, the bar code is rendered on a print out 206 using a printer connected to computer system 208. The bar code may later be scanned by a scanner of a POS terminal to identify the item being purchased that is eligible for a discount using the electronic coupon.

Print out 206 includes a scannable copy of the bar code such that it may be later scanned by a scanner at a POS terminal to identify the type of item eligible for a discount using the electronic coupon. Print out 206 also serves as a reminder to consumer 202 of which electronic coupons are stored on coupon card 204.

In certain implementations, print out 206 includes advertisements. In certain implementations, print out 206 additionally includes information regarding soon-to-be-available electronic coupons.

Once the information relating to the selected electronic coupon is downloaded to computer system 208, the account identifier is written to a coupon card 204 using card read-write

device 216. In certain implementations, card read-write device 216 is attached as a peripheral to computer system 208. In certain implementations, card read-write device 216 is a memory card reader. In such an implementation, coupon card 204 is a smart card and the account identifier is stored in the memory of an embedded chip. In certain implementations, coupon card 204 is a contact smart card having a contact area that when inserted into card read-write device 216 makes contact with electrical connectors capable of writing the information to memory. In certain implementations, coupon card 204 is a contactless smart card in which the chip communicates with card read-write device 216 through radio-frequency identification (RFID) induction technology.

In certain implementations, card read-write device 216 is a magnetic card reader. In such an implementation, coupon card 204 has a magnetic data stripe. The account identifier is stored on coupon card 204 when the magnetic data stripe is placed in physical contact with a read-write head of card read-write device 216.

In certain implementations, coupon card 204 includes both an embedded chip and a magnetic stripe. In other implementations, coupon card 204 is also a portable consumer device, such as a credit card, debit card, prepaid card, loyalty card or other such device associated with an account of consumer 202. In such implementations, consumer 202 may use coupon card 204 to both receive a discount and pay for the item.

In the illustrated implementation of FIG. 2-US, consumer 202 may also associate coupon card 204 with at least one electronic coupon using a dual range (i.e., long range wireless communications and short range wireless communications), web-enabled cellular telephone 210, where coupon card 204 is a smart card. In such implementations, consumer 202 uses the cellular telephony functionality of cellular telephone 210 to connect to the Internet or World Wide Web and browse to a website having electronic coupons provided by a web service. Upon selecting an electronic coupon, the associated information is downloaded to cellular telephone 210, including the account identifier for the third-party sponsoring the electronic coupon.

In such implementations where the information downloaded also includes a bar code, the bar code is capable of being rendered on the display of cellular telephone 210. The bar code can later be scanned by a scanner at a POS terminal to identify the type of item eligible for a discount using the electronic coupon.

Once the information relating to the selected electronic coupon is downloaded to cellular telephone 210, the account identifier associated with the sponsor of the electronic coupon is written to coupon card 204 using a moblet stored on cellular telephone 210. The moblet is executed to provide functionality to short range wireless communication that writes to the

memory of coupon card 204, such as via a near field communication (NFC) card read-write application capable of using wireless NFC to read and write data to the memory of coupon card 204.

In the illustrated implementation of FIG. 2-US, consumer 202 may also associate a coupon card 204 with at least one electronic coupon using a kiosk 214. Kiosk 214 is in communication with a database (not shown), preferably kept in one or more device storage devices, capable of storing and relating information regarding the available electronic coupons. In one implementation, a third-party offering at least one electronic coupon has access to the database and may send to and receive from the database information such as the number of electronic coupons used, the number of electronic coupons remaining, or any other relevant information.

When using kiosk 214, consumer 202 is presented with a user interface displaying a plurality of electronic coupons and uses an input device to make a selection. In one implementation, consumer 202 then receives from kiosk 214 a coupon card 204. In such an implementation, kiosk 214 includes a stack of blank coupon cards which may be issued to consumer 202. In other implementations, consumer 202 obtains coupon card 204 and provides it to kiosk 214 via a card receiving device to have the selected electronic coupons stored thereon. In such implementations, consumer 202 may purchase coupon card 204 from a merchant. In other implementations, consumer 202 may receive coupon card 204 from the third-party, a merchant, or any other entity having an interest in providing electronic coupons. In yet other implementations, coupon card 204 is also a portable consumer device and is issued by an issuer to consumer 202 (i.e., the consumer's credit, debit, gift, or pre-paid card).

In using kiosk 214 to associate coupon card 204 with at least one electronic coupon, kiosk 214 stores information relating to the electronic coupon selected by consumer 202 on coupon card 204, including the account identifier associated with an account of the electronic coupon sponsor.

In those implementations where the selected electronic coupon is also associated with a bar code identifying the type of item for which the electronic coupon is valid, kiosk 214 additionally dispensed to consumer 202 a print out 206 having the bar code printed thereon. The print out may later be scanned by a scanner at a POS terminal, as would a typical coupon.

Turning to FIG. 3-US, both a front view 300A and a rear view 300B of an exemplary coupon card 302 are presented. Images may be displayed on both sides of coupon card 302, with image 308A on the front view 300A being either the same as or different from image 308B on

the rear view 300B. In this illustration, the front view 300A also displays information about the provider of the coupon card.

FIG. 3-US also shows exemplary implementations of a data encoding area of coupon card 302. The data encoding area may include an optional shielding element, which allows desired electromagnetic, optical, or radiative signals to penetrate while protecting the data encoding area from physical abuse or damage. Coupon card 302 may optionally have areas outside of the data encoding area shielded from physical abuse or otherwise acceptable forms of electromagnetic radiation. Some of the acceptable signals that are allowed to penetrate the shielding and may include, but are not limited to, signals accompanying a magnetic field, RFID signals, IrDA signals, visible light, invisible light, modulated laser, and/or modulated RF communication signals. By way of example and not limitation, a selective shielding element may comprise a clear plastic shield, conformal coatings, an opaque plastic shield, or a clear thin film, depending on the implementation of the data encoding area.

Non-limiting examples of the data encoding area are shown at reference numeral 300, and include an integrated circuit or 'chip' 304 having contact(s) 306, a magnetic stripe assembly 310, an antenna and/or transceiver 320, and electrical contacts 340. Magnetic stripe assembly 310 may comprise, in the implementation shown as 310A, a reprogrammable magnetic stripe assembly 310B that accepts data and/or commands from a processor and formats and renders that data into a form on a magnetic stripe that is readable by conventional merchant magnetic stripe-reading point of sale (POS) terminals. In this manner, the processor may program a particular account for use in a transaction as a function of user input selecting the account. Alternatively, the processor may erase the magnetic stripe of assembly 310, rendering the card useless in the event of its loss or theft. In the implementation shown as 310A, magnetic stripe assembly 310B at least partially slidably moves 310C into and out of an assembly of coupon card 302 (partial view shown), allowing coupon card 302 to conduct a transaction at a point of sale terminal that includes a magnetic stripe reader.,

Coupon card 302 can bear, on a surface thereof, an image 350 of a free sample and/or the offeror of the free sample. Memory, such as may be contained in chip 304, can have encoded therein, but is not limited to, (i) an identifier for the free sample (e.g., UPC, SKU, Bar Code data, etc); (ii) a quantity for the free sample; (iii) a sponsor company account for a selling merchant to charge the cost of the free sample for payment to a selling merchant account to reimburse the selling merchant for the free sample; (iv) data for rendering an image corresponding to the free sample; and (v) an identifier for a coupon provider donating the free sample to the consumer who presents the coupon card to the selling merchant.

Continuing with FIG. 3-US, another implementation of the data encoding area is shown as an antenna and/or transceiver 320. Antenna and/or transceiver 320 may include commonly used loop inductors such as the one shown 320A or in those shown in related ISO standards for RF-readable smart cards. With such an interface, account data may be translated, modulated and transmitted in a manner acceptable by an RF contactless merchant POS terminal, a 802.11 WiFi or WiMax network, or by a cellular or RF communications network. For instance, antenna and/or transceiver 320 may receive a wireless communication from a card read-write device, where the wireless communication carries data for a manufacturer's discount coupon account that is to be written in memory to the data encoding area 300.

Electrical contacts 340 are yet another alternative implementation of the data encoding area shown in FIG. 3-US. With coupon card 302 possessing physical contacts such as an array of conductive pads or shapes 340A, coupon card 302 may be placed in physical contact with a merchant POS terminals, and electrical contacts 340 may establish connectivity to the merchant's financial processing system. The processor may relay account-related information to the merchant POS terminal through the contact interface, thereby allowing coupon card 302 to be utilized with the large number of preexisting merchant POS terminals.

Within the exemplary payment processing system depicted in FIG. 1-US, discussed below, FIG. 4-US illustrates the general environment wherein a coupon card, such as coupon card 302 (FIG. 3-US) obtained by the process described in connection with FIG. 2-US, is used by a consumer to receive a discount on the purchase of goods and services. To start, at POS terminal 422, consumer 402 presents to merchant 410 coupon card 414 along with the item(s) consumer 402 wishes to purchase. Merchant 410 uses a card reader associated with POS terminal 422 to read the information stored on coupon card 414, including the account identifier associated with electronic coupon sponsor 412. In certain implementations, coupon card 414 is read by swiping coupon card 414 through POS terminal 422 to read data magnetically encoded in its magstripe . In other implementations, POS terminal 422 reads coupon card 414 using a contactless technology, such as RFID, when consumer 402 is near POS terminal 422. In yet other implementations, to be read, coupon card 414 is inserted into POS terminal 422 such that external contacts on coupon card 414 establish connectivity with POS terminal 422.

In certain implementations, other information is also read from coupon card 414, such as, by way of example and not limitation, an expiration date, an item type, or an item quantity. In such implementations, POS terminal 422 may determine whether the electronic coupon is valid for the item being purchased. This may occur, by way of example and not limitation, by comparing the current date with the expiration data of the electronic coupon. Alternatively, POS

terminal 422 may determine whether consumer 402 has purchased the quantity of the discounted item specified. POS terminal 422 may also verify whether consumer 402 has actually purchased the item or item type for which the electronic coupon is applicable.

In one implementation, consumer 402 additionally provides print out 420 to merchant 410. Print out 420 has a bar code printed thereon that identifies the item eligible for a discount using the electronic coupon stored on coupon card 414. In such an implementation, the bar code is scanned with a scanner associated with POS terminal 422 to identify the item that is eligible for the discount.

In certain implementations, merchant 410 may additionally enter the amount of the discount into POS terminal 422. In such implementations, the discount amount may be printed on print out 420. In other implementations, the discount amount is read by POS terminal 422 from coupon card 414. In certain implementations, POS terminal 422 calculates the discount amount. This may occur, by way of example and not limitation, where the discount is valid for the purchase of multiple items. In such an implementation, POS terminal 422 may calculate the discount amount by multiplying the discount per item by the number of items purchased.

Upon receipt of coupon card 414, the transaction is processed similarly to a method described below in connection with FIG. 1-US. Merchant 410 submits an authorization request to acquirer 408 via POS terminal 422, which includes the account identifier read from coupon card 414.

In certain implementations, the authorization request may additionally include an account identifier associated with consumer 402 where consumer 402 has paid for the purchase using a credit card, debit card, or other portable consumer device.

Where acquirer 408 is not the same entity as issuer 404, acquirer 408 forwards the transaction information to a transaction handler 406, who in turn forwards it to issuer 404 to verify that the account associated with electronic coupon sponsor 412 contains sufficient funds to reimburse merchant 410 for the discount.

Upon receipt of a reply from issuer 404, transaction handler 406 forwards an authorization response to acquirer 408, who forwards it to POS terminal 422 of merchant 410. Where the authorization response contains an approval of the use of the electronic coupon, consumer 402 is given a discount on the retail purchase price of the item.

In certain implementations, merchant 410 invalidates or deletes the electronic coupon(s) stored on coupon card 414 using POS terminal 422 once the discount has been applied. In certain implementations, coupon card 414 may be a one-time use card. In such an implementation, merchant 410 may forgo returning coupon card 414 to consumer 402. In other

implementations, coupon card 414 may be used to store subsequent electronic coupons and therefore is returned to consumer 402.

In certain implementations, approval of the transaction may be more involved. In such implementations, the authorization request includes additional information, by way of example and not limitation, the item, the item type, and/or the sponsor of the electronic coupon. In certain implementations this information is forwarded by transaction handler 406 to coupon processor 424 for processing. In one implementation, database 416 may be used to, by way of example and not limitation, verify that electronic coupon sponsor 412 has issued the electronic coupon consumer 402 is attempting to use. In such an implementation, the authorization process may include a comparison, performed by coupon processor 424, of the additional information provided against information stored in database 416. In yet other implementations, coupon processor 424 adds a notation to a coupon stored in database 416 once it has been used by a consumer, thereby preventing the coupon from being used more than once. Coupon processor 424 may have direct access to database 416 or may access database 416 via transaction handler 406.

In other implementations, coupon processor 424 uses database 416 to keep a tally of the electronic coupons used by consumers. In such an implementation, this information is used by electronic coupon sponsor 412 in deciding future electronic coupons to issue or for identifying specific consumers for targeted advertising. In still other implementations, the additional information includes an identifier for the advertisement that was presented to consumer 402 with the electronic coupon being used. In such an implementation, after the information is stored in database 416 by coupon processor 424, electronic coupon sponsor 412 may charge another entity a fee for each time the advertisement is shown to consumers. Alternatively, electronic coupon sponsor 412 may change the advertisement associated with an electronic coupon after the advertisement has been presented with the electronic coupon a given number of times.

In other implementations, database 418 is used. As with database 416, coupon processor 424 may access database 418 directly or via transaction handler 406. Database 418 may contain information regarding the account issued to each coupon sponsor 412(r), where electronic coupon sponsor 412(r) is one of (R) coupon sponsors. In such implementations, coupon processor 424 uses database 418 to verify that the account identifier read from coupon card 414 is associated with one of the (R) electronic coupon sponsors. Database 418 may additionally be used to verify that the associated account contains funds sufficient to reimburse merchant 410 for the discount applied.

In certain implementations, coupon processor 424 is the same entity as transaction handler 406. In other implementations, coupon processor 424 is a separate entity from transaction handler 406.

When merchant 410 submits the transaction to payment processing system 400 via POS terminal 422 for clearing and settlement, the account of electronic coupon sponsor 412 is debited for the cost of the discount. Specifically, merchant 410 submits a request for payment to acquirer 408. Where acquirer 408 is not the same entity as issuer 404, acquirer 408 forwards the request to transaction handler 406. Transaction handler 406 in turn requests payment for the discount from issuer 404, where issuer 404 is the issuer of the account associated with electronic coupon sponsor 412. Issuer 404 debits the account and forward the payment to transaction handler 406 who forwards the payment to acquirer 408. Finally, acquirer 408 credits the account of merchant 410 with the amount of the discount.

In certain implementations, the clearing and settlement process may involve coupon processor 424. In such an implementation, coupon processor 424 may, by way of example and not limitation, record each electronic coupon that has been cleared and settled. This record may be kept in database 416 or in another separate database. Alternatively or in addition to, coupon processor may verify that the electronic coupon was used in the transaction being cleared and settled. In yet other implementations, coupon processor 424 may determine the account associated with coupon sponsor 412 in order that transaction handler 406 may request issuer 404 debit that account. In such implementations, coupon processor 424 may access database 418.

As will be understood by a person of ordinary skill in the art, the process described in connection with FIG. 4-US is equally applicable to the situation where a consumer uses a coupon card having multiple electronic coupons stored thereon to receive a discount on several items. In such a situation, the electronic coupons may be provided by different electronic coupon sponsors having accounts issued by different issuers. Further, it will be clear to a person of ordinary skill in the art that a coupon card may have multiple electronic coupons stored thereon that are valid at different merchants, each having a different acquirer.

Turning now to FIG. 5-US, a flow chart of an exemplary method used by a transaction handler to process an electronic coupon stored on a coupon card is presented. As indicated by block 502, the transaction handler receives an authorization request from a merchant, requesting authorization to apply a discount associated with an electronic coupon to a transaction. Upon receipt of the request, the transaction handler matches the account identifier included in the request with the account identifier associated with the electronic coupon sponsor, as indicated by block 504. In certain implementations, the matching is performed by a coupon processor. In

such implementations the coupon processor may be a separate entity from the transaction handler. In certain implementations, if the account identifier included in the request does not match the account identifier associated with the electronic coupon sponsor, the transaction handler sends an authorization response to the merchant containing a denial of the coupon. In such an implementation, the process may end.

In the illustrated implementation of FIG. 5-US, the transaction handler next sends a request to the issuer of the account associated with the electronic coupon sponsor requesting verification that the account contains sufficient funds to reimburse the merchant for the discount, as indicated by block 506. As indicated by block 508, upon receipt of a response from the issuer, the transaction handler sends a response to the merchant. Where the issuer confirms that the account contains sufficient funds, the authorization request may contain an approval. Finally, as indicated by block 510, the transaction handler clears and settles the transaction by requesting that the issuer debit the account of the electronic coupon sponsor and an acquirer for the merchant credit the merchant's account for the discount applied..

In certain implementations, instructions are encoded in computer readable medium wherein those instructions are executed by a processor to perform one or more of the blocks 502, 504, 506, 508, and 510 recited in FIG. 5-US.

In yet other implementations, instructions reside in any other computer program product, where those instructions are executed by a computer external to, or internal to, a computing system to perform one or more of the blocks 502, 504, 506, 508, and 510 recited in FIG. 5-US. In either case the instructions may be encoded in a computer readable medium comprising, for example, a magnetic information storage medium, an optical information storage medium, an electronic information storage medium, and the like. "Electronic storage media," may mean, for example and without limitation, one or more devices, such as and without limitation, a PROM, EPROM, EEPROM, Flash PROM, compactflash, smartmedia, and the like. In certain implementations, individual blocks described above may be combined, eliminated, or reordered.

As an example of how the described coupon card may used, a consumer may take a coupon card with them to the grocery store, where the coupon card has at least one coupon stored thereon. At the check-out counter, the consumer provides the coupon card and a print out of bar codes to the cashier. The cashier swipes the magnetic strip of the coupon card through the POS terminal and scans the bar codes on the print out. The cashier then scans the SKU/UPCs for each item the consumer is purchasing. The POS terminal determines if the electronic coupons apply to any of the items by comparing the bar codes with the scanned SKU/UPCs. For example, the coupon card may contain multiple electronic coupons, one of which is for a discount on bread

and is provided by the manufacturer of the bread. Another electronic coupon, provided by the grocery store, may be for a discount on pet food. When the POS terminal receives the SKU/UPCs for a loaf of bread and a bag of pet food, the POS terminal requests authorization to apply a discount to the items. The authorization request is, for example, received by the grocery store's acquirer.

As the acquirer is the issuer of the account associated with the grocery store, the acquirer verifies if the account has been credited with sufficient funds to pay for the discount on the pet food and sends an authorization response to the POS terminal. The request for authorization to apply a discount to the bread is forwarded by the acquirer to a transaction handler for processing. The transaction handler in turn may forward a request to the issuer of the manufacturer's account for verification that the account contains sufficient funds. Upon receiving a response, the transaction handler may send an authorization response authorizing the application of the discount to the bread.

Once the POS terminal receives the authorization responses for both coupons, the discounts are applied. The consumer may then use the coupon card to pay for the items, where the coupon card is associated with an account of the consumer's, or the consumer may use an alternative payment method.

An Exemplary Transaction Processing System

Referring to Figure 1-US, a transaction processing system 100 is seen. The general environment of Figure 1-US include that of a merchant (m) 110, such as the merchant, who can conduct a transaction for goods and/or services with an account user (au) (e.g., consumer) on an account issued to an account holder (a) 108 by an issuer (i) 104, where the processes of paying and being paid for the transaction are coordinated by at least one transaction handler (th) 102 (e.g., the transaction handler) (collectively "users"). The transaction includes participation from different entities that are each a component of the transaction processing system 100.

The transaction processing system 100 may have at least one of a plurality of transaction handlers (th) 102 that includes transaction handler (1) 102 through transaction handler (TH) 102, where TH can be up to and greater than an eight digit integer.

The transaction processing system 100 has a plurality of merchants (m) 110 that includes merchant (1) 110 through merchant (M) 110, where M can be up to and greater than an eight digit integer. Merchant (m) 110 may be a person or entity that sells goods and/or services. Merchant (m) 110 may also be, for instance, a manufacturer, a distributor, a retailer, a load agent, a drugstore, a grocery store, a gas station, a hardware store, a supermarket, a boutique, a

restaurant, or a doctor's office. In a business-to-business setting, the account holder (a) 108 may be a second merchant (m) 110 making a purchase from another merchant (m) 110.

Transaction processing system 100 includes account user (1) 108 through account user (AU) 108, where AU can be as large as a ten digit integer or larger. Each account user (au) conducts a transaction with merchant (m) 110 for goods and/or services using the account that has been issued by an issuer (i) 104 to a corresponding account holder (a) 108. Data from the transaction on the account is collected by the merchant (m) 110 and forwarded to a corresponding acquirer (a) 106. Acquirer (a) 106 forwards the data to transaction handler (th) 102 who facilitates payment for the transaction from the account issued by the issuer (i) 104 to account holder (a) 108.

Transaction processing system 100 has a plurality of acquirers (q) 106. Each acquirer (q) 106 may be assisted in processing one or more transactions by a corresponding agent acquirer (aq) 106, where 'q' can be an integer from 1 to Q, where aq can be an integer from 1 to AQ, and where Q and AQ can be as large as a eight digit integer or larger. Each acquirer (q) 106 may be assisted in processing one or more transactions by a corresponding agent acquirer (aq) 106, where 'q' can be an integer from 1 to Q, where aq can be an integer from 1 to AQ, and where Q and AQ can be as large as a eight digit integer or larger.

The transaction handler (th) 102 may process a plurality of transactions within the transaction processing system 100. The transaction handler (th) 102 can include one or a plurality or networks and switches (ns) 102. Each network/switch (ns) 102 can be a mainframe computer in a geographic location different than each other network/switch (ns) 102, where 'ns' is an integer from one to NS, and where NS can be as large as a four digit integer or larger.

Dedicated communication systems 120, 122 (e.g., private communication network(s)) facilitate communication between the transaction handler (th) 102 and each issuer (i) 104 and each acquirer (a) 106. A Network 112, via e-mail, the World Wide Web, cellular telephony, and/or other optionally public and private communications systems, can facilitate communications 122a-622e among and between each issuer (i) 104, each acquirer (a) 106, each merchant (m) 110, each account holder (a) 108, and the transaction handler (th) 102. Alternatively and optionally, one or more dedicated communication systems 124, 126, and 128 can facilitate respective communications between each acquirer (a) 106 and each merchant (m) 110, each merchant (m) and each account holder (a) 108, and each account holder (a) 108 and each issuer (i) 104, respectively.

The Network 112 may represent any of a variety of suitable means for exchanging data, such as: an Internet, an intranet, an extranet, a wide area network (WAN), a local area network

(LAN), a virtual private network, a satellite communications network, an Automatic Teller Machine (ATM) network, an interactive television network, or any combination of the forgoing. Network 112 may contain either or both wired and wireless connections for the transmission of signals including electrical, magnetic, and a combination thereof. Examples of such connections are known in the art and include: radio frequency connections, optical connections, etc. To illustrate, the connection for the transmission of signals may be a telephone link, a Digital Subscriber Line, or cable link. Moreover, network 112 may utilize any of a variety of communication protocols, such as Transmission Control Protocol/Internet Protocol (TCP /IP), for example. There may be multiple nodes within the network 112, each of which may conduct some level of processing on the data transmitted within the transaction processing system 100.

Users of the transaction processing system 100 may interact with one another or receive data about one another within the transaction processing system 100 using any of a variety of communication devices. The communication device may have a processing unit operatively connected to a display and memory such as Random Access Memory ("RAM") and/or Read-Only Memory ("ROM"). The communication device may be combination of hardware and software that enables an input device such as a keyboard, a mouse, a stylus and touch screen, or the like.

For example, use of the transaction processing system 100 by the account holder (a) 108 may include the use of a portable consumer device (PCD). The PCD may be one of the communication devices, or may be used in conjunction with, or as part of, the communication device. The PCD may be in a form factor that can be: a card (e.g., bank card, payment card, financial card, credit card, charge card, debit card, gift card, transit pass, smart card, access card, a payroll card, security card, healthcare card, or telephone card), a tag, a wristwatch, wrist band, a key ring, a fob (e.g., SPEEDPASS® commercially available from ExxonMobil Corporation), a machine readable medium containing account information, a pager, a cellular telephone, a personal digital assistant, a digital audio player, a computer (e.g., laptop computer), a set-top box, a portable workstation, a minicomputer, or a combination thereof. The PCD may have near field or far field communication capabilities (e.g., satellite communication or communication to cell sites of a cellular network) for telephony or data transfer such as communication with a global positioning system (GPS). The PCD may support a number of services such as SMS for text messaging and Multimedia Messaging Service (MMS) for transfer of photographs and videos, electronic mail (email) access.

The PCD may include a computer readable medium. The computer readable medium, such as a magnetic stripe or a memory of a chip or a chipset, may include a volatile, a non-

volatile, a read only, or a programmable memory that stores data, such as an account identifier, a consumer identifier, and/or an expiration date. The computer readable medium may including executable instructions that, when executed by a computer, the computer will perform a method. For example, the computer readable memory may include information such as the account number or an account holder (a) 108's name.

Examples of the PCD with memory and executable instructions include: a smart card, a personal digital assistant, a digital audio player, a cellular telephone, a personal computer, or a combination thereof. To illustrate, the PCD may be a financial card that can be used by a consumer to conduct a contactless transaction with a merchant, where the financial card includes a microprocessor, a programmable memory, and a transponder (e.g., transmitter or receiver). The financial card can have near field communication capabilities, such as by one or more radio frequency communications such as are used in a "Blue Tooth" communication wireless protocol for exchanging data over short distances from fixed and mobile devices, thereby creating personal area networks.

Merchant (m) 110 may utilize at least one POI terminal (e.g., Point of Service or browser enabled consumer cellular telephone); that can communicate with the account user (au) 108, the acquirer (a) 106, the transaction handler (th) 102, or the issuer (i) 104. A Point of Interaction (POI) can be a physical or virtual communication vehicle that provides the opportunity, through any channel to engage with the consumer for the purposes of providing content, messaging or other communication, related directly or indirectly to the facilitation or execution of a transaction between the merchant (m) 110 and the consumer. Examples of the POI include: a physical or virtual Point of Service (POS) terminal, the PCD of the consumer, a portable digital assistant, a cellular telephone, paper mail, e-mail, an Internet website rendered via a browser executing on computing device, or a combination of the forgoing. Thus, the POI terminal is in operative communication with the transaction processing system 100.

The PCD may interface with the POI using a mechanism including any suitable electrical, magnetic, or optical interfacing system such as a contactless system using radio frequency, a magnetic field recognition system, or a contact system such as a magnetic stripe reader. To illustrate, the POI may have a magnetic stripe reader that makes contact with the magnetic stripe of a healthcare card (e.g., Flexible Savings Account card) of the consumer. As such, data encoded in the magnetic stripe on the healthcare card of consumer read and passed to the POI at merchant (m) 110. These data can include an account identifier of a healthcare account. In another example, the POI may be the PCD of the consumer, such as the cellular telephone of the consumer, where the merchant (m) 110, or an agent thereof, receives the account identifier of the

consumer via a webpage of an interactive website rendered by a browser executing on a World Wide Web (Web) enabled PCD.

Typically, a transaction begins with account user (au) 108 presenting the portable consumer device to the merchant (m) 110 to initiate an exchange for resources (e.g., a good or service). The portable consumer device may be associated with an account (e.g., a credit account) of account holder (a) 108 that was issued to the account holder (a) 108 by issuer (i) 104.

Merchant (m) 110 may use the POI terminal to obtain account information, such as a number of the account of the account holder (a) 108, from the portable consumer device. The portable consumer device may interface with the POI terminal using a mechanism including any suitable electrical, magnetic, or optical interfacing system such as a contactless system using radio frequency or magnetic field recognition system or contact system such as a magnetic stripe reader. The POI terminal sends a transaction authorization request to the issuer (i) 104 of the account associated with the PCD. Alternatively, or in combination, the PCD may communicate with issuer (i) 104, transaction handler (th) 102, or acquirer (a) 106.

Issuer (i) 104 may authorize the transaction and forward same to the transaction handler (th) 102. Transaction handler (th) 102 may also clear the transaction. Authorization includes issuer (i) 104, or transaction handler (th) 102 on behalf of issuer (i) 104, authorizing the transaction in connection with issuer (i) 104's instructions such as through the use of business rules. The business rules could include instructions or guidelines from the transaction handler (th) 102, the account holder (a) 108, the merchant (m) 110, the acquirer (a) 106, the issuer (i) 104, a related financial institution, or combinations thereof. The transaction handler (th) 102 may, but need not, maintain a log or history of authorized transactions. Once approved, the merchant (m) 110 may record the authorization, allowing the account user (au) 108 to receive the good or service from merchant (m) or an agent thereof.

The merchant (m) 110 may, at discrete periods, such as the end of the day, submit a list of authorized transactions to the acquirer (a) 106 or other transaction related data for processing through the transaction processing system 100. The transaction handler (th) 102 may optionally compare the submitted authorized transaction list with its own log of authorized transactions. The transaction handler (th) 102 may route authorization transaction amount requests from the corresponding the acquirer (a) 106 to the corresponding issuer (i) 104 involved in each transaction. Once the acquirer (a) 106 receives the payment of the authorized transaction from the issuer (i) 104, the acquirer (a) 106 can forward the payment to the merchant (m) 110 less any transaction costs, such as fees for the processing of the transaction. If the transaction involves a

debit or pre-paid card, the acquirer (a) 106 may choose not to wait for the issuer (i) 104 to forward the payment prior to paying merchant (m) 110.

There may be intermittent steps in the foregoing process, some of which may occur simultaneously. For example, the acquirer (a) 106 can initiate the clearing and settling process, which can result in payment to the acquirer (a) 106 for the amount of the transaction. The acquirer (a) 106 may request from the transaction handler (th) 102 that the transaction be cleared and settled. Clearing includes the exchange of financial information between the issuer (i) 104 and the acquirer (a) 106 and settlement includes the exchange of funds. The transaction handler (th) 102 can provide services in connection with settlement of the transaction. The settlement of a transaction includes depositing an amount of the transaction settlement from a settlement house, such as a settlement bank, which transaction handler (th) 102 typically chooses, into a clearinghouse bank, such as a clearing bank, that acquirer (a) 106 typically chooses. The issuer (i) 104 deposits the same from a clearinghouse bank, such as a clearing bank, which the issuer (i) 104 typically chooses, into the settlement house. Thus, a typical transaction involves various entities to request, authorize, and fulfill processing the transaction.

The transaction processing system 100 will preferably have network components suitable for scaling the number and data payload size of transactions that can be authorized, cleared and settled in both real time and batch processing. These include hardware, software, data elements, and storage network devices for the same. Examples of transaction processing system 100 include those operated, at least in part, by: American Express Travel Related Services Company, Inc; MasterCard International, Inc.; Discover Financial Services, Inc.; First Data Corporation; Diners Club International, LTD; Visa Inc.; and agents of the foregoing.

Each of the network/switch (ns) 102 can include one or more data centers for processing transactions, where each transaction can include up to 100 kilobytes of data or more. The data corresponding to the transaction can include information about the types and quantities of goods and services in the transaction, information about the account holder (a) 108, the account user (au) 108, the merchant (m) 110, tax and incentive treatment(s) of the goods and services, coupons, rebates, rewards, loyalty, discounts, returns, exchanges, cash-back transactions, etc.

By way of example, network/switch (ns) 102 can include one or more mainframe computers (e.g., one or more IBM mainframe computers) for one or more server farms (e.g., one or more Sun UNIX Super servers), where the mainframe computers and server farms can be in diverse geographic locations.

Each issuer (i) 104 (or agent issuer (ai) 104 thereof) and each acquirer (a) 106 (or agent acquirer (aq) 106 thereof) can use or more router/switch (e.g., CiscoTM routers/switches) to communicate with each network/switch (ns) 102 via dedicated communication systems.

Transaction handler (th) 102 can store information about transactions processed through transaction processing system 100 in data warehouses such as may be incorporated as part of the plurality of networks/switches 102. This information can be data mined. The data mining transaction research and modeling can be used for advertising, account holder and merchant loyalty incentives and rewards, fraud detection and prediction, and to develop tools to demonstrate savings and efficiencies made possible by use of the transaction processing system 100 over paying and being paid by cash, or other traditional payment mechanisms.

The VisaNet® system is an example component of the transaction handler (th) 102 in the transaction processing system 100. Presently, the VisaNet® system is operated in part by Visa Inc. As of 2006, the VisaNet® system Inc. was processing around 300 million transaction daily, on over 1 billion accounts used in over 170 countries. Financial instructions numbering over 16,000 connected through the VisaNet® system to around 30 million merchants (m) 110. In 2007, around 81 billion transactions for about 4 trillion U.S. dollars were cleared and settled through the VisaNet® system, some of which involved a communication length of around 24,000 miles in around two (2) seconds and during which a plurality of stops are made for processing data in the transaction.

Implementation B: Figures 1-US, 2-US1, 3-US1, and 3-US

In one implementation, a method is presented where, at a web service, a selection of an electronic coupon from a database is received from a web browser. The electronic coupon is associated with the account of the electronic coupon sponsor and is receivable by a merchant for a discount which is debited from the sponsor's account and credited to the merchant's account. A specification is then received that includes the rendering capability of the client, a type of portable coupon device associated with a consumer account and acceptable as payment for a future purchase, and an identifier of the consumer account. Next, a rendering image, a location to store the discount information in the memory of the type of the portable coupon device, and the discount information is retrieved from the database. Finally, the web browser transmits, via the web service, the rendering image, memory location, and discount information.

In reference to Figs. 1-US, 2-US1, 3-US1, and 3-US, within the general environment of the exemplary payment processing system depicted in FIG. 1-US, FIG. 2-US1 illustrates the process by which consumer 202 selects an electronic coupon for storage on a coupon card and uses the coupon card to obtain a discount on a purchase. Consumer 202 uses the web browser of

web-enabled computer system 204 to connect to Internet 206 and browse to website 208 where electronic coupons are available for download. In certain implementations, computer system 204 is a personal computer. In other implementations, computer system 204 is a laptop computer. In yet other implementations, computer system 204 is a tablet computer. In still other implementations, computer system 204 may be a blackberry or other hand held computing device.

In the illustrated implementation of FIG. 2-US1, computer system 204 renders website 208 on associated display device 209. Website 208 displays the electronic coupons that are currently available. In certain implementations, website 208 is connected to a searchable database having multiple electronic coupons stored therein. Each of the electronic coupons are associated with the account of the sponsor of the electronic coupon and can be used by consumer 202 to receive a discount on a purchase.

In certain implementations, website 208 is a manufacturer's website having electronic coupons for products made by the manufacturer. In other implementations, website 208 is a merchant's website having electronic coupons for products sold by the merchant. In yet other implementations, website 208 is an unrelated party's website. In such an implementation, the unrelated party may be offering electronic coupons as part of a promotional effort, awareness campaign, or any other purpose. Alternatively, the unrelated party may offer a multitude of electronic coupons issued by different manufacturers and merchants for a fee. The fee may be paid by the sponsors of the electronic coupons in return for the service of offering their electronic coupons or the fee may be paid by consumer 202 as a membership fee for access to the electronic coupons.

Consumer 202, via the web browser, selects a coupon from website 208. In certain implementations, consumer 202 additionally provides information regarding computer system 204 such as, by way of example and not limitation, the capability of computer system 204 to render a hard copy of the electronic device, the type of coupon card consumer 202 has, and an identifier of an account issued to consumer 202. In certain implementations, the provided information further includes the capability of computer system 204 to communicate and write information to a portable coupon device. In certain implementations, website 208 retrieves such information from computer system 204.

When an electronic coupon is selected by consumer 202, information relating to that electronic coupon is retrieved and downloaded to computer system 204. In certain implementations, the information is retrieved from a database. The retrieved information, in certain implementations, includes identifiers for an account, the amount of the discount, and the

item that is eligible for the discount. The retrieved information may also include a location in the memory of the portable coupon device where the identifiers are to be stored. The account identifier, as will be discussed in greater detail below, is associated with an account issued by an issuer to the third-party sponsor of the electronic coupon. The account is credited with funds provided by the coupon sponsor to pay for the discount applied when a consumer uses the electronic coupon.

In certain implementations, the retrieved information further includes the category or type of product or service for which the electronic coupon is valid. By way of example and not limitation, the electronic coupon may be valid for all cleaning products made by a particular manufacturer. Alternatively, the electronic coupon may be valid for a specific dish soap made by the manufacturer.

In certain implementations, the retrieved information includes a merchant or manufacturer with which the electronic coupon is valid. In such an implementation, the electronic coupon may be valid for use only with a particular merchant or only for purchase of a particular manufacturer's product. In other implementations, the retrieved information includes an expiration date, after which the electronic coupon is no longer valid. In yet other implementations, the retrieved information includes the number of goods or services eligible for a discount using the electronic coupon. By way of example and not limitation, the electronic coupon may be valid for discounts on up to three (3) bottles of a pain reliever. Alternatively, the electronic coupon may only be used when ten (10) car washes are purchased at the same time.

In certain implementations, the retrieved information also includes a bar code identifying the type of item for which the electronic coupon is valid. In such an implementation, the bar code is rendered on print-out 210 using a printer connected to computer system 204. In certain implementations, the bar code on print-out 210 is later scanned by a scanner at a POS terminal to identify the type of item eligible for a discount using the electronic coupon. Print-out 210 also serves as a reminder to consumer 202 of the electronic coupons they selected.

In certain implementations, the retrieved information further includes instructions executable by computer system 204. In such implementations, the instructions may be, by way of example and not limitation, to communicate information to a coupon card, communicate a command executable by a coupon card to store information in a particular location in memory, or to render print-out 210 of the electronic coupon.

In certain implementations, print-out 210 additionally includes advertisements. In certain implementations, print-out 210 includes information regarding soon-to-be-available electronic coupons.

In certain implementations, the bar codes are printed on print-out 210 in an order that makes it easier for consumer 202 to find the specific electronic coupon they wish to use. In such implementations, the ordering may by the item type. Alternatively, the ordering may be alphanumeric, by manufacturer, by merchant, or by any other means of ordering, or a combination thereof. Further, in certain implementations, consumer 202 selects the ordering used. In yet other implementations, consumer 202 selects the specific electronic coupons they intend to use and have only those bar codes printed on print-out 210. By way of example and not limitation, a consumer who is going grocery shopping is able to print only the bar codes for the electronic coupons valid at that grocery store even though they additionally downloaded electronic coupons for a hardware store.

In the illustrated implementation of FIG. 2-US1, the information is written to a coupon card using card read-write device 212. In certain implementations, card read-write device 212 is attached as a peripheral to computer system 204. In certain implementations, card read-write device 212 is a memory card reader. In such an implementation, the coupon card is a smart card and the information is stored in the memory of an embedded chip. In certain implementations, the coupon card is a contact smart card having a contact area that when inserted into card read-write device 212 makes contact with electrical connectors capable of writing the information to memory. In certain implementations, the coupon card is a contactless smart card in which the chip communicates with card read-write device 212 through radio-frequency identification (RFID) induction technology.

In certain implementations, card read-write device 212 is a magnetic card reader. In such an implementation, the coupon card has a magnetic data stripe. The information is stored on the coupon card when the magnetic data stripe is placed in physical contact with a read-write head of card read-write device 212.

In certain implementations, the coupon card includes both an embedded chip and a magnetic stripe. In certain implementations, the coupon card is also a portable consumer device, such as a credit card, debit card, prepaid card, loyalty card, or other such device associated with an account of consumer 202. In such implementations, consumer 202 may use the coupon card to both receive a discount on an item and to pay for the purchase price of the item.

Consumer 202 may obtain the coupon card by purchasing it from a merchant. Alternatively, consumer 202 may receive the coupon card for free. By way of example, and not by way of limitation, the coupon card may be provided by a grocery store as a promotional item and may only be used for discounts on items purchased at the grocery store. Where the coupon

card is also a portable consumer device, consumer 202 may receive the coupon card from an issuer.

After information pertaining to the electronic coupon is stored on the coupon card, the coupon card can be used in a future transaction with merchant 216 for a discount on an item. In certain implementations, when purchasing an item, consumer 202 presents the coupon card at the POS terminal of merchant 216 and the information stored thereon is read to determine the associated account. In certain implementations, the coupon card is read by swiping the coupon card through the POS terminal. In other implementations, the POS terminal reads the coupon card using RFID when consumer 202 is near the POS terminal. In yet other implementations, to be read, the coupon card is inserted into the POS terminal such that external contacts on the coupon card establish connectivity with the POS terminal.

In certain implementations, other information is read, such as, by way of example and without limitation, an expiration date, an item type, or an item quantity. In such implementations, the POS terminal may determine whether the electronic coupon is valid for the item being purchased. This may occur, by way of example and not limitation, by comparing the current date with the expiration data of the coupon. Alternatively, the POS terminal may determine whether consumer 202 has purchased the quantity of the discounted item specified. The POS terminal may also verify whether consumer 202 has purchased the item type for which the electronic coupon is applicable.

In certain implementations, consumer 202 additionally presents print-out 210. In such an implementation, the bar code printed on print-out 210 is scanned with a scanner of the POS terminal to identify the item that is eligible for the discount. In certain implementations, the merchant 216 additionally enters the amount of the discount into the POS terminal.

In the illustrated implementation of FIG. 2-US1, Merchant 216 submits the electronic coupon to payment processing system 100 (FIG. 1-US) for authorization in a similar manner to that described in connection with FIG. 1-US. Specifically, merchant 216 submits a request, including the account identifier of the sponsor of the electronic coupon to acquirer 218 for authorization. Where acquirer 218 is not the same entity as issuer 222, acquirer 218 forwards the request to transaction handler 220. Transaction handler 220 in turn requests that issuer 222 verify that the account associated with the sponsor of the electronic coupon contains sufficient funds to reimburse merchant 216 for the discount. Upon receipt of a reply from issuer 222, transaction handler 220 forwards an authorization response to acquirer 218, who forwards it to merchant 216. Where the authorization response contains an approval of the electronic coupon, consumer 202 is given a discount on the retail purchase price of the item. In certain

implementations, merchant 216 additionally invalidates or deletes the electronic coupon stored on the coupon card.

When merchant 216 submits the transaction to payment processing system 100 (FIG. 1-US) for clearing and settlement, the account of the coupon sponsor is debited for the cost of the discount. Specifically, merchant 216 submits a request for payment to acquirer 218. Where acquirer 218 is not the same entity as issuer 222, acquirer 218 forwards the request to transaction handler 220. Transaction handler 220 in turn requests payment for the discount from issuer 222, where issuer 222 is the issuer of the account associated with the coupon sponsor. Issuer 222 debits the account and forwards the payment to transaction handler 220 who forwards the payment to acquirer 218. Finally, acquirer 218 credits the account of merchant 216 account with the amount of the discount.

The steps of a method, process, or algorithm described in connection with the implementations disclosed herein may be embodied directly in hardware, in a software module executed by a processor, or in a combination of the two. In certain implementations, instructions are encoded in computer readable medium wherein those instructions are executed by a processor to perform one or more of the steps recited in describing FIG. 2-US1.

Turning now to FIG. 3-US1, a flow chart of an exemplary method used by a personal computing system to provide a consumer with a coupon card having an electronic coupon stored thereon is presented. As indicated by block 302, the personal computer system connects to a website having a web service to serve electronic coupons for download via the internet. Upon receipt of a selection of an electronic coupon, information associated with the electronic coupon is downloaded to the personal computer system, including an account identifier associated with the sponsor of the selected electronic coupon and a bar code identifying the item or type of item eligible for a discount using the selected electronic coupon, as indicated by blocks 304 and 306. In certain implementations, additional information associated with the selected electronic coupon is also downloaded, such as, by way of example and not limitation, an expiration date, the item type, a quantity, the discount amount, or any other information regarding the electronic coupon, or combination thereof.

Next, the account identifier is stored on a coupon card via a card read/write device, where the card read/write device is part of the personal computer system, as indicated by block 308. In certain implementations, additional information associated with the selected electronic coupon is stored on the coupon card. Lastly, as indicated by block 310, the personal computer system prints the downloaded bar code on a print-out, where the bar code can be scanned by a scanner of a POS terminal.

In certain implementations, individual blocks described above may be combined, eliminated, or reordered. In certain implementations, instructions are encoded in computer readable medium wherein those instructions are executed by a processor to perform one or more of the blocks 302, 304, 306, 308, 310, 312, and 314 recited in FIG. 3-US1. In yet other implementations, the invention includes instructions residing in any other computer program product, where those instructions are executed by a computer external to, or internal to, a computing system to perform one or more of the blocks 302, 304, 306, 308, 310, 312, and 314 recited in FIG. 3-US1.

Implementation C: Figures 1-US, 2-US2, 3-US2, and 3-US.

In one implementation, a method is disclosed for use in a payment processing network is provided. The method includes browsing to an Internet website in communication with a web service having a database storing electronic coupons. Each electronic coupon is associated with a sponsor's account and is receivable by a merchant for a discount, where the discount is debited from the sponsor's account and credited to the merchant's. The browser sends the selected electronic coupon and a specification including the rendering capability of the client, the type of portable coupon device, and an identifier for the consumer account associated with the portable coupon device. The browser then receives a rendering image, the memory storage location for the discount information, and the discount information, which includes identifiers for the sponsor account, the discount amount, and the eligible purchase. Finally the discount information is written to the memory of the portable coupon device.

In reference to Figs. 1-US, 2-US2, 3-US2, and 3-US, within the general environment of the exemplary payment processing system depicted in FIG. 1-US, FIG. 2-US2 illustrates process 200 by which consumer 202 selects an electronic coupon for storage on a coupon card using cellular telephone 204 and subsequently uses the coupon card to obtain a discount on an item. Cellular telephone 204 is a dual range cellular telephone. As will by understood by one of ordinary skill in the art, a dual range cellular telephone is a cellular telephone capable of both far field and near field communication. Near field communication (NFC) is a short-range wireless connectivity standard (Ecma-340, ISO/IEC 18092) that uses magnetic field induction to enable communication between devices when they are brought within close proximity to one another.

Further, cellular telephone 204 is web-enabled. As one of ordinary skill in the art will appreciate, to be "web-enabled" means a client that is able to connect to the World Wide Web via a browser executing on the client. Thus, a web-enabled cellular phone is a cellular telephone that is able to receive voice calls as well as transmit and receive data from the Internet, and

specific web pages, or portions thereof, on the World Wide Web. In certain implementations, a web-enabled cellular phone uses a built-in modem to connect to the Internet.

In certain implementations, cellular telephone 204 can also be a personal digital assistant (PDA). In yet other implementations, cellular telephone 204 is a smartphone. In yet other implementations, cellular telephone 204 is any web enabled device that has short and long range (i.e., dual range) wireless capabilities.

In the illustrative implementation of FIG. 2-US2, consumer 202 uses a cellular telephone 204 to connect to the Internet 206 (World Wide Web) and execute a browser application to browse to a website 208 for a web service that serves electronic coupons. In certain implementations, cellular telephone 204 is equipped with a plurality of mobile applications ('moblets') 210(1)-210(N). One moblet 210(n) of the plurality of moblets 210(1)-210(N) includes a cellular telephony browser. As is known by one of ordinary skill in the art, a moblet is an application which can be used on mobile devices. In certain implementations, cellular telephone 204 is purchased by consumer 202 with some or all of moblets 210(1)-210(N) already stored thereon. In other implementations, some or all of moblets 210(1)-210(N) are downloaded onto cellular telephone 204 by consumer 202.

Website 208 is rendered on display 212 of cellular telephone 204. Website 208 provides access to available electronic coupons. In certain implementations, website 208 is connected, via a web service, to a searchable database having multiple electronic coupons stored therein. In certain implementations, website 208 is a manufacturer's website having electronic coupons for products made by the manufacturer. In other implementations, website 208 is a merchant's website having electronic coupons for products sold by the merchant. In yet other implementations, website 208 is an unrelated party's website. In such an implementation, the unrelated party may be offering electronic coupons as part of a promotional effort, awareness campaign, or any other purpose. Alternatively, the unrelated party may offer a multitude of electronic coupons issued by different manufacturers and merchants for a fee. The fee may be paid by the sponsors of the electronic coupons in return for the service of offering their electronic coupons. Alternatively, the fee may be paid by consumer 202 as a membership fee for access to the electronic coupons.

Consumer 202 selects an electronic coupon from those being offered on website 208. In certain implementations, consumer 202 may additionally send information regarding the web enabled client being used by consumer 202, illustrated in FIG. 2-US2 as cellular telephone 204, and the type of coupon card consumer 202 has. In certain implementations, the information provided includes the rendering capabilities of the web enabled client consumer 202 is using to

render an image on a display in communication with the web enabled client. In certain implementations, the information provided includes an account identifier for an account issued to consumer 202 and associated with the portable coupon device.

When an electronic coupon is selected by consumer 202, information relating to that electronic coupon is downloaded to cellular telephone 204, including an account identifier for the third-party sponsor of the electronic coupon. The account identifier, as will be discussed in greater detail below, is associated with an account issued by an issuer to the sponsor of the electronic coupon. The account is credited with funds provided by the offering party to pay for the discount applied when a consumer uses the electronic coupon. The downloaded information further includes the category or type of product or service for which the electronic coupon is valid. By way of example and not limitation, the electronic coupon may be valid for all cleaning products made by a particular manufacturer. Alternatively, the electronic coupon may be valid for a specific dish soap made by the manufacturer.

In certain implementations, the downloaded information includes a merchant or manufacturer with which the electronic coupon is valid. In such an implementation, the electronic coupon may be valid for use only with a particular merchant or only for purchase of a particular manufacturer's product. In other implementations, the downloaded information includes an expiration date, after which the electronic coupon is no longer valid. In yet other implementations, the downloaded information includes the number of goods or services eligible for a discount using the electronic coupon. By way of example and not limitation, the electronic coupon may be valid for discounts on up to three (3) bottles of a pain reliever. Alternatively, the electronic coupon may only be used when ten (10) car washes are purchased at the same time.

In certain implementations, the downloaded information includes a bar code identifying the type of item for which the electronic coupon is valid. As will be understood by one of ordinary skill in the art, a bar code is an optical machine-readable representation of data. In certain implementations, the downloaded bar code uses Universal Product Code (UPC) symbology. In such an implementation, the bar code is capable of being rendered on display 212 such that the bar code can later be scanned by a scanner at a POS terminal to identify the type of item eligible for a discount using the electronic coupon. In such implementations where the downloaded information includes a bar code and where consumer 202 has provided the rendering capability of the web enabled client being used, here illustrated as cellular telephone 204, website 208 will provide a bar code which corresponds to the rendering capabilities of the web enabled client.

In certain implementations, the downloaded information additionally includes an identifier of the item or type of item eligible for a discount where the identifier can be displayed on display 212. The identifier therefore acts as a reminder to the consumer of the electronic coupon that was downloaded. In certain implementations, the identifier is a picture of the discounted item. In other implementations, the identifier is a text description of the discounted item. In certain implementations, the identifier is a combination of text description and a picture.

In certain implementations, the downloaded information additionally includes an advertisement that is capable of being displayed on display 212. In certain implementations, the advertisement is for a soon-to-be-available electronic coupon.

Once the information relating to the selected electronic coupon is downloaded to cellular telephone 204, some of the information may be stored in memory. In some such implementations, the information stored on cellular telephone 204 is ordered to make it easier for consumer 202 to find the specific electronic coupon they wish to use. The ordering may by the item type. Alternatively, the ordering may be alphanumeric, by manufacturer, by merchant, or by any other means of ordering, or a combination thereof. Further, in certain implementations, consumer 202 selects the ordering used.

In certain implementations, the downloaded information additionally includes instructions executable by the web enabled client being used by consumer 202, illustrated in FIG. 2-US2 as cellular telephone 204. By way of example and not limitation, the instructions may include to communicate with coupon card 214, to store information in a specific location in the memory of coupon card 214, to delete information from the memory of cellular telephone 204 and/or coupon card 214 when the coupon has been used, or to render an image on display 212.

The account identifier associated with the sponsor of the electronic coupon is written to coupon card 214 using moblet 210(n) of moblets 210(1)-210(N), where coupon card 214 is a smart cart. In certain implementations, consumer 202 initiates the process. In other implementations, the process is initiated automatically.

Moblet 210(n) includes an NFC card read-write driver capable of using NFC to read and write data to the memory of coupon card 214. Coupon card 214 is a contactless smart card in which the chip generally communicates with moblet 210(n) through radio-frequency identification (RFID) technology.

In certain implementations, coupon card 214 additionally includes a contact area that when inserted in a card read-write device makes contact with electrical connectors capable of writing information to memory. In certain implementations, coupon card 214 additionally has a

magnetic stripe. In such an implementation, additional information may be written to or read from the magnetic stripe by a card read-write device.

In certain implementations, coupon card 214 includes both an embedded chip and a magnetic stripe. In certain implementations, the coupon card is also a portable consumer device, such as a credit card, debit card, prepaid card, merchant loyalty card or other such device associated with an account of consumer 202. In such implementations, consumer 202 may use coupon card 214 to both receive a discount on an item and to pay for the purchase price of the item.

Consumer 202 may obtain coupon card 214 by purchasing it from a merchant. Alternatively, consumer 202 may receive coupon card 214 for free. By way of example and not limitation, coupon card 214 may be provided by a grocery store as a promotional item and may only be used for discounts on items purchased at the grocery store. Where coupon card 214 is also a portable consumer device, consumer 202 may receive the coupon card from an issuer.

After information pertaining to the electronic coupon is stored on coupon card 214, coupon card 214 can be used in a future transaction with merchant 216 for a discount on an item. In certain implementations, when purchasing an item, consumer 202 presents coupon card 214 at the POS terminal of merchant 216 and the information stored thereon is read to determine the associated account. In certain implementations, coupon card 214 is read by swiping coupon card 214 through the POS terminal. In certain implementations, coupon card 214 is read by RFID when consumer 202 is near the POS terminal (i.e., a 'contactless' transaction). In yet other implementations, to be read, coupon card 214 is inserted into the POS terminal such that external contacts on coupon card 214 establish connectivity with the POS terminal.

In certain implementations, other information is also read, such as, by way of example and not limitation, an expiration date, an item type, or an item quantity. In such implementations, the POS terminal may determine whether the electronic coupon is valid for one of the items being purchased. This may occur, by way of example, and not by way of limitation, by comparing the current date with the expiration data of the electronic coupon. Alternatively, the POS terminal may determine whether consumer 202 has purchased the quantity of the discounted item specified.

Where consumer 202 has additionally downloaded a bar code to cellular telephone 204, consumer 202 may also present display 212 of cellular telephone 204 having the bar code rendered thereon. In such an implementation, the bar code is scanned with a scanner to identify the item, or category of item, that is eligible for the discount. In certain implementations, merchant 216 additionally enters the amount of the discount into the POS terminal.

In some implementations where multiple bar codes have been downloaded, consumer 202 can flag or otherwise mark each bar code corresponding to the items they are purchasing. In certain implementations, an identifier other then the bar code may be flagged. In certain implementations, when consumer 202 presents cellular telephone 204 to merchant 216 only those bar codes that have been flagged are displayed. Alternatively, where cellular telephone 204 displays each bar code individually on display 212, only those bar codes that have been flagged are queued for display. Thus, by way of example and not limitation, a consumer may have downloaded ten (10) electronic coupons, but only found six (6) of the items in the merchant's store. As the consumer finds each of the six (6) items, the consumer flags the bar code or other identifier corresponding to the items. Then, when purchasing the items, the consumer provides the cellular telephone to the cashier with only the bar codes for the six (6) items displayed.

In the illustrative implementation of FIG. 2-US2, Merchant 216 submits the electronic coupon received from consumer 202 to payment processing system 100 (FIG. 1-US) for authorization in a similar manner to that described in connection with FIG. 1-US. Specifically, merchant 216 submits a request, including the account identifier of the sponsor of the electronic coupon to acquirer 218 for authorization. Where acquirer 218 is not the same entity as issuer 222, acquirer 218 forwards the request to transaction handler 220. Transaction handler 220 in turn requests that issuer 222 verify that the account associated with the sponsor of the electronic coupon contains sufficient funds to reimburse merchant 216 for the discount. Upon receipt of a reply from issuer 222, transaction handler 220 forwards an authorization response to acquirer 218, who forwards it to merchant 216. Where the authorization response contains an approval of the electronic coupon, consumer 202 is given a discount on the retail purchase price of the item. In certain implementations, merchant 216 additionally invalidates or deletes the electronic coupon stored on coupon card 214.

When merchant 216 submits the transaction to payment processing system 100 (FIG. 1-US) for clearing and settlement, the account of the sponsor of the electronic coupon is debited for the cost of the discount. Specifically, merchant 216 submits a request for payment to acquirer 218. Where acquirer 218 is not the same entity as issuer 222, acquirer 218 forwards the request to transaction handler 220. Transaction handler 220 in turn requests payment for the discount from issuer 222, where issuer 222 is the issuer of the account associated with the sponsor of the electronic coupon. Issuer 222 debits the account and forwards the payment to transaction handler 220 who forwards the payment to acquirer 218. Finally, acquirer 218 credits the account of merchant 216 with the amount of the discount.

Turning to FIG. 3-US2, a detailed implementation of cellular telephone 302 is presented, where cellular telephone 302 is capable of being used in the exemplary process described in connection with FIG. 2-US2. Cellular telephone 302 is shown having processor 304, operating system 306, memory 308, and moblets stack 326. As will be clear to one of ordinary skill in the art, processor 304 executes instructions stored in memory 326 of cellular telephone 302. Memory 326 is a computer readable medium and may include, without limitation, PROM, EPROM, EEPROM, Flash PROM, compactflash, smartmedia, and the like. Processor 304 may be any computer processor capable of being used in a cellular telephone.

As will also be clear to one of ordinary skill in the art, operating system 306 provides the software infrastructure for cellular telephone 302 and acts as a host for applications that are run on cellular telephone 302. Operating system 306 may be any operating system capable of being used on a cellular telephone.

In the illustrated implementation of FIG. 3-US2, moblets stack 326 is depicted as including four (4) moblets: user interface 310, cellular telephony browser 312, a Near Field Communications (NFC) smart card read-writer application 314, and screen renderer application 316. Each moblet of moblets stack 308 is stored in the memory of cellular telephone 302. In the exemplary process described in connection with FIG. 2-US2, a consumer uses User Interface (UI) 310 of cellular telephone 302 to initiate cellular telephony browser 312, connect to Internet 318, and browse via execution of browser 312 to website 320. As describe with reference to FIG. 2-US2, cellular telephony browser 312 is used to interact with website 320 and download electronic coupons to cellular telephone 302.

Once an electronic coupon has been downloaded to cellular telephone 302, the execution of the smart card read-writer 314, via NFC wireless communications, is used to write to the memory of smart card 322, or otherwise store in the memory of smart card 322, the account identifier associated with the sponsor of the electronic, where smart card 322 is a coupon card. Smart card read-writer 314 may additionally store other information associated with the electronic coupon in the memory of smart card 322 such as, by way of example and not limitation, an expiration date, an item type, or an item quantity.

In certain implementations, cellular telephony browser 312 is also used to download a bar code identifying the item eligible for a discount. Screen renderer 316 is then used to render a scannable bar code on display 324 of cellular telephone 302. In the illustrated implementation of FIG. 3-US2, display 324 is shown as displaying, by way of example, and not limitation, the merchant that the electronic coupon is valid at, how many electronic coupons the consumer

downloaded, a scannable bar code for the electronic coupon, and information identifying the item eligible for a discount using the electronic coupon.

Implementation D: Figures 1-US, 2-US3, 3-US3, 3-US and 5-US3

In one implementation, a method is disclosed for providing an electronic coupon to a user of a kiosk is disclosed. The method includes receiving, via an input device of a user interface, a selection of an electronic coupon from a database. Each electronic coupon in the database is associated with a sponsor's account and can be used to receive a discount on a purchase from a merchant, where the discount is debited from the sponsor's account and credited to the merchant's. From the database, the kiosk retrieves a rendering image corresponding to the rendering capabilities of the kiosk and a memory location to store the discount information, and the discount information. The discount information includes identifiers for the sponsor's account, the discount amount, and the purchase eligible for the discount. The discount information is written to the portable coupon device and it is dispensed. Finally, a hard copy of the rendering image is rendered.

In reference to FIGS.. 1-US, 2-US3, 3-US3, 3-US and 5-US3, FIG. 2-US3 depicts a block diagram of a kiosk 202 that can be used by a user 208 to obtain a coupon card associated with at least one electronic coupon issued by a third-party and capable of being used in payment processing system 100 (FIG. 1-US) to obtain a discount on a transaction between a consumer (i.e., the user 208) and a merchant. Although the implementation is discussed in regards to a substantially planar laminated card, one skilled in the art will recognize that other forms of transaction tokens or portable consumer payment devices could be used in the disclosed method.

The kiosk itself is in communication with a database 204 that is capable of storing and relating information regarding the available electronic coupons. In one implementation, a third-party sponsoring at least one electronic coupon has access to database 204 and may send to and receive from database 204 information such as, without limitation, the number of electronic coupons used, the number of electronic coupons remaining, or any other relevant information. In certain implementations, database 204 may be stored on one or more network devices on a network. In such implementations, the kiosk is capable of connecting to a network using one or more network communications protocols as are known in the art.

In use of kiosk 202, consumer 208 is presented with a selection of electronic coupons by a user interface 206 of the kiosk 202. User interface 206 may be a touch screen, a digital electronic display, a projector, a monitor, any combination of the foregoing, or any other device for the presentation of information. Additionally, the kiosk may have a speaker 210 or other device capable of providing instructions and information to consumer 208.

In certain implementations, the selection of electronic coupons presented to consumer 208 is customized to consumer 208. By way of example and not limitation, in such implementations, the customization may be based upon known shopping habits of consumer 208, the location where consumer 208 lives, the location of the kiosk, and/or a type of financial transaction token provided by consumer 208. In certain implementations, consumer 208 provides identifying information to the kiosk, for example and without limitation, a zip code, name, financial transaction token, or driver's license. Consumer 208 may provide this information using input device 216. In other implementations, consumer 208 may provide the identifying information via device 218 where the information is stored on a financial transaction token, driver's license, or other similar device.

Consumer 208 selects an electronic coupon using an input device 216. The input device 216 may be a key pad, a touch screen, a pointing device, an audio input device, a video input device, any combination of the foregoing, or other hardware capable of receiving and transforming data for use by the kiosk 202.

In one implementation, consumer 208 receives from the kiosk 202 a coupon card 212 via device 218, which is both a transaction token reader and a card producer. In other implementations, consumer 208 may receive the coupon card 212 via another device. In certain implementations, the kiosk includes a stack of blank coupon cards which, upon enhancement by the kiosk 202 as disclosed herein, may be dispensed by kiosk 202 to consumer 208. In certain implementations, consumer 208 pays a fee for coupon card 212. In such an implementation, consumer 208 may provide a financial transaction token, such as, without limitation, the consumer's credit card or a debit card, to device 218 which, in turn, provide enhancements thereto as disclosed herein,.

In other implementations, consumer 208 obtains coupon card 212 and provides it to the kiosk via device 218. In such implementations, consumer 208 may purchase coupon card 212 from a merchant. In other implementations, consumer 208 may receive coupon card 212 from a manufacturer, a merchant, or any other entity having an interest in sponsoring electronic coupons. In yet other implementations, coupon card 212 is also a portable consumer device and is issued by an issuer to consumer 208 (i.e., a credit card, a debit card, a gift card, etc.)

The kiosk 202 write to, or otherwise stores on, coupon card 212 information relating to the electronic coupon selected by consumer 208. In certain implementations, the information is stored in a specific memory location. In such implementations, the memory location may be dependent on the type of coupon card. The information stored in the memory of the coupon card includes the account identifier associated with an account issued by an issuer to the third-party

sponsor of the electronic coupon. The account is credited with funds provided by the third-party sponsor to pay for the discount applied when a consumer uses the electronic coupon. In certain implementations, the information further includes the item or type of item for which the electronic coupon is valid. By way of example, and not by way of limitation, the electronic coupon may be valid for all cleaning products made by a particular manufacturer. Alternatively, the coupon may be valid for a specific dish soap produced by the manufacturer in only a particular size, weight, or quantity.

In certain implementations, the information includes a merchant or manufacturer with which the electronic coupon is valid. In such an implementation, the electronic coupon may be valid for use only with a particular merchant or only for purchase of a particular manufacturer's product. In other implementations, the information includes an expiration date, after which the electronic coupon is no longer valid. In yet other implementations, the information includes the number of goods or services eligible for a discount using the electronic coupon. By way of example and not limitation, the electronic coupon may be valid for discounts on up to three (3) bottles of a pain reliever. Alternatively, the electronic coupon may only be used when ten (10) car washes are purchased at the same time.

The information may be stored on coupon card 212 using a magnetic strip, a memory portion of an integrated circuit, a contactless data communication device, a combination of any of the foregoing, or any other known device or method of storing information on a card or equivalent thereof that will be developed.

In certain implementations, the selected electronic coupon may also be associated with a bar code identifying the item or type of item for which the electronic coupon is valid. As will be understood by one of ordinary skill in the art, a bar code is an optical machine-readable representation of data. In certain implementations, the bar code uses Universal Product Code (UPC) symbology. In such an implementation, the bar code is capable of being rendered on a print-out by a printer associated with the kiosk. The print-out may then later be scanned by a scanner at a POS terminal to identify the type of item eligible for a discount using the electronic coupon.

Where consumer 208 receives a print-out in addition to coupon card 212, the print-out may include an identifier of the item or type of item eligible for a discount. The identifier then acts as a reminder to consumer 208 of the electronic coupon that was downloaded. In certain implementations, the identifier is a picture of the discounted item. In other implementations, the identifier is a text description of the discounted item. In certain implementations, the identifier is a combination of a text description and a picture.

In certain implementations, the print-out may additionally include an advertisement. In certain implementations, the advertisement is for a soon-to-be-available coupon. In certain implementations, the print-out may additionally include a map having directions from the kiosk to merchant locations, where the electronic coupon can be used. Where the kiosk is located in a mall or similar shopping establishment, the map may be a walking map. The map may be obtain by the kiosk 202, for instance, by communicating to a mapping Internet or web service the location of a merchant corresponding to a user-selected coupon and the kiosk's geographic location, where the kiosk 202 is then served the map from the mapping web or Internet service.

In one implementation, the kiosk 202 is additionally capable of printing an image 214 on coupon card 212. To achieve such functionality, the kiosk may contain a card printer such as, for example, the Direct-to-Card (DTC) 550 or High Definition Printing (HDP) 5000 commercially available from Fargo Electronics, Inc., a corporation located in Eden Prairie, Minnesota. In certain implementations, image 214 is an advertisement. In certain implementations, image 214 is an advertisement that is associated with at least one electronic coupon stored on coupon card 212.

It will be apparent to an individual of ordinary skill in the relevant art that consumer 208 may use kiosk 202 to store multiple electronic coupons on coupon card 212 at the same time. In such situations, consumer 208 may select different electronic coupons associated with different third-party accounts for storage on coupon card 212. Thus, for example, consumer 208 may select one electronic coupon sponsored by a manufacturer and one electronic coupon sponsored by a merchant for storage on the same coupon card. Alternatively, consumer 208 may select multiple electronic coupons sponsored by a single merchant for storage on one coupon card and then select multiple coupons sponsored by a single manufacturer for storage on another coupon card.

Turning now to FIG. 3-US3, a flow chart of an exemplary method used by a kiosk to provide a coupon card having an electronic coupon stored thereon to a consumer is presented. As indicated by block 302, to start, the kiosk receives a selection of an electronic coupon from a consumer. Next, the kiosk stores information relating to the selected electronic coupon on a blank coupon card, including an account identifier associated with the sponsor of the selected electronic coupon, as indicated by block 304. In certain implementations, the blank coupon card is one of a plurality of blank coupon cards stored in the kiosk. In other implementations, the coupon card is provided by the consumer via an input device to the kiosk. In such an implementation, the coupon card may or may not be blank. Where the coupon card is not blank, the kiosk may add the information for the selected electronic coupon to the prior information

stored on the coupon card. In other implementations, the kiosk may overwrite the prior information stored on the coupon card such that any previously stored electronic coupons are deleted. In other implementations, the kiosk may present the consumer with the option of deleting the previously stored electronic coupons or adding the selected electronic coupon to the electronic coupons already stored on the coupon card.

In regards to the coupon card, the kiosk may store may information on a magnetic strip, an integrated circuit, a contactless data communication device, a combination of any of the foregoing, or any other storage medium on a card.

As indicated by block 306, after the information associated with the selected electronic coupon is stored on the coupon card, the coupon card is dispensed to the consumer. Finally, the kiosk prints a bar code identifying the item or type of items eligible for a discount using the selected electronic coupon on a print-out, as indicated by block 308. The print-out is also dispensed by the kiosk to the consumer. In certain implementations, individual steps in FIG. 3-US3. described above may be combined, eliminated, or reordered. In certain implementations, instructions are encoded in computer readable medium wherein those instructions are executed by a processor to perform one or more of the blocks 302, 304, 306, and 308 recited in FIG. 3-US3.

In yet other implementations, the invention includes instructions residing in any other computer program product, where those instructions are executed by a computer external to, or internal to, a computing system to perform one or more of the blocks 302, 304, 306, and 308 recited in FIG. 3-US3. In certain implementations, individual blocks described above may be combined, eliminated, or reordered.

Within the exemplary payment processing system depicted in FIG. 1-US, FIG. 5-US3 illustrates the general environment wherein a coupon card may be used by a consumer to obtain a discount on the purchase of goods and services. To start, consumer 502 selects a coupon that is to encoded on and/or into an enhanced coupon card 514(q) that is dispensed to consumer 502 by a kiosk (p) 512. Consumer 502 presents to merchant 510 the coupon card 514(q). The information stored on coupon card 514(q) is read to determine the third-party account associated with the electronic coupon being used to conduct the transaction between consumer 502 and the merchant 510. In certain implementations, coupon card 514(q) is read by RFID when consumer 502 is near the POS terminal (a 'contactless' transaction). In other implementations, a magstripe of coupon card 514(q) is read being swiped through a magstripe reader in communication with the POS terminal. In still other implementations, coupon card 514(q) is read by being inserted

into the POS terminal such that external contacts on coupon card 514(q) establish connectivity with the POS terminal that facilitate the reading of memory therein.

In certain implementations, other information is also read from coupon card coupon card 514(q), such as, without limitation, an expiration date, an item type, or an item quantity. In such implementations, the POS terminal may determine whether the electronic coupon is valid for an item being purchased by consumer 502. This may occur, by way of example and not limitation, by comparing the current date with the expiration data of the electronic coupon. Alternatively, the POS terminal may determine whether consumer 502 has purchased the quantity of the discounted item specified.

In certain implementations, consumer 502 provides Print-out 522 to merchant 510. Print-out 522 includes a bar code printed thereon which identifies the item eligible for a discount using the electronic coupon stored on coupon card 514. In such an implementation, the bar code is scanned with a scanner to identify the item that is eligible for the discount. In certain implementations, merchant 510 additionally enters the amount of the discount into the POS terminal.

In certain implementations, coupon card 514(q) may be a one-time use card. In such an implementation, merchant 510 may forgo returning coupon card 514(q) to consumer 502. In other implementations, coupon card 514(q) may be used to store subsequent electronic coupons obtained using kiosk 512, and therefore is returned to consumer 502.

Upon receipt of coupon card 514(q), the transaction is processed similarly to the method previously described in connection with FIG. 1-US. Merchant 510 submits the authorization request to acquirer 508. Where acquirer 508 is not the same entity as issuer 504, acquirer 508 forwards the transaction information to a transaction handler 506, who in turn forwards it to issuer 504 to verify that the account associated with the sponsor of the coupon contains sufficient funds to reimburse merchant 510 for the discount. Upon receipt of a reply from issuer 504, transaction handler 506 forwards an authorization response to acquirer 508, who forwards it to merchant 510. Where the authorization response contains an approval of the use of the electronic coupon, consumer 502 is given a discount on the retail purchase price of the item. In certain implementations, merchant 510 additionally invalidates or deletes the electronic coupon stored on coupon card 514

In certain implementations, approval of the transaction may be more involved. In such implementations, the authorization request includes additional information, by way of example and not limitation, the item, the item type, and/or the sponsor of the electronic coupon. In one implementation, database 516 may be used to, by way of example and not limitation, verify that

electronic coupon sponsor 520 has issued the electronic coupon that consumer 502 is attempting to use. In such an implementation, the authorization process may include comparing the additional information provided against information stored in database 516. In other implementations, database 516 is used to keep a tally of the electronic coupons used by consumers. In such an implementation, this information may then be used by electronic coupon sponsor 520 in deciding future electronic coupons to issue or for identifying specific consumers for targeted advertising. In still other implementations, the additional information includes an identifier for the advertisement that was presented to consumer 502 with the electronic coupon being used. In such an implementation, electronic coupon sponsor 520 may charge another entity a fee for each time the advertisement is shown to consumers. Alternatively, electronic coupon sponsor 520 may change the advertisement associated with an electronic coupon after the advertisement has been presented with the electronic coupon a given number of times.

In other implementations, database 518 is used. Database 518 may contain information regarding the account issued to each coupon sponsor 520(r), where electronic coupon sponsor 520(r) is one of (R) coupon sponsors. In such implementations, database 518 may be used to verify that the account identifier read from coupon card 514 is associated with one of the (R) electronic coupon sponsors. Database 518 may additionally be used to verify that the associated account contains funds sufficient to reimburse merchant 510 for the discount applied.

When merchant 510 submits the transaction to payment processing system 500 for clearing and settlement, the account of the sponsor of the coupon is deducted for the cost of the discount. Specifically, merchant 510 submits a request for payment to acquirer 508. Where acquirer 508 is not the same entity as issuer 504, acquirer 508 forwards the request to transaction handler 506. Transaction handler 506 in turn requests payment for the discount from issuer 504, where issuer 504 is the issuer of the account associated with the sponsor of the coupon. Issuer 504 deducted the amount of the discount from the account and forward the payment to transaction handler 506 who forwards the payment to acquirer 508. Finally, acquirer 508 adds the amount of the discount to the account of merchant 510. As such, the merchant has been compensated for the amount of the discount given to the consumer.

As an example of how the described coupon card may used, a consumer may take a coupon card with them to the grocery store. While at the grocery store, the consumer uses a kiosk inside the grocery store to obtain an enhancement to their coupon card so as to have selected electronic coupons stored thereon. The consumer uses the kiosk's interface to select specific electronic coupons they want to use, for example one for bread offered by the manufacturer of the bread, and one for pet food offered by the grocery store the consumer is

shopping at. The electronic coupons and associated information are then written to the coupon card by the kiosk. The kiosk then dispenses the coupon card and an accompanying print-out of bar codes and identifying information for each such selected coupon and corresponding discount. While the consumer is shopping, the consumer can use the print-out to remember what coupons are stored on the coupon card.

At the check-out counter, the consumer provides the coupon card and a print-out of bar codes to the cashier. The cashier swipes the magnetic strip of the coupon card through the POS terminal (or interrogates a smart coupon card with a contactless reader) and scans the bar codes on the print-out. The cashier then scans the SKU/UPCs (Stock-Keeping Unit/Universal Product Code) for each item the consumer is purchasing.

The POS terminal determines if the electronic coupons apply to any of the items being purchased by comparing the bar codes with the scanned SKU/UPCs. For example, the coupon card may contain multiple electronic coupons, one of which is for a discount on bread and is provided by the manufacturer of the bread. Another electronic coupon, that is provided by the grocery store, may be for a discount on pet food. When the POS terminal receives the SKU/UPCs for a loaf of bread and a bag of pet food, the POS terminal requests authorization to apply a discount to those two (2) items. The authorization request is, for example, received by the grocery store's acquirer.

As the acquirer is the issuer of the account associated with the grocery store, the acquirer verifies if the account for the sponsor of the discount has sufficient funds to pay for the discount on the pet food and sends an authorization response to the POS terminal. The request for authorization to apply a discount to the bread is forwarded by the acquirer to a transaction handler for processing. The transaction handler in turn may forward a request to the issuer of the manufacturer's account for verification that the account contains sufficient funds. Upon receiving a response, the transaction handler may send an authorization response authorizing the application of the discount to the bread.

Once the POS terminal receives the authorization responses for both coupons, the discounts are applied. The consumer may then also use the coupon card to pay for the items, where the coupon card is associated with an account of the consumer's (i.e., the credit card or the debit card of the consumer which has been enhanced by a kiosk so as to also contain discount coupon information used in the transaction at the merchant's POS), or the consumer may use an alternative payment method (cash, checks, food stamps, etc.)

Implementation E: Figures 1-US, 2-US4, 3-US, 4-US4 and 5-US4.

In one implementation, a method is disclosed for using a point of service terminal (POS) to provide a discount on a purchase is presented. The method includes receiving a portable coupon device associated with a consumer account. Stored in the memory of the portable coupon device is an electronic coupon associated with a sponsor account and which is receivable by a merchant for a discount on a purchase, the discount being debited from the sponsor's account. Also stored in memory is the discount information, which includes identifiers for the sponsor's account, a discount amount, and the purchase eligible for the discount. The discount information is then read from the portable coupon card and a transmission is formed requesting authorization of the electronic coupon. An authorization response is received and, if it includes an approval, the discount is applied to the cost of the purchase and payment for the cost less the discount amount is accepted.

In reference to Figs. 1-US, 2-US4, 3-US, 4-US4 and 5-US4, FIG. 2-US4 illustrates an exemplary block diagram depicting a consumer associating a coupon card with at least one electronic coupon that may be used to obtain a discount on the purchase of goods and services. Although the implementation is discussed in regards to a substantially planar laminated card, one skilled in the art will recognize that other forms of transaction tokens (i.e., portable consumer payment devices) could be used in the disclosed method.

In the illustrated implementation of FIG. 2-US4, consumer 202 may associate a coupon card 204 with at least one electronic coupon using several methods. In one implementation, consumer 202 uses a web-enabled computer system 208 to connect to the /World Wide Web and browse to a website having electronic coupons available for downloading via a web service. In such an implementation, consumer 202 uses the browser to select at least one of the electronic coupons offered. Information relating to that electronic coupon is then downloaded to computer system 208, including an account identifier for the party offering the electronic coupon.

In certain implementations, the information further includes the type of product or service for which the electronic coupon is valid. By way of example and not limitation, the electronic coupon may be valid for all cleaning products made by a particular manufacturer. Alternatively, the electronic coupon may be valid for a specific dish soap made by the manufacturer.

In other implementations, the information also includes a merchant or manufacturer with which the electronic coupon is valid. In such an implementation, the electronic coupon may only be valid for use with a particular merchant or only for the purchase of a particular manufacturer's product. In other implementations, the information includes an expiration date, after which the electronic coupon is no longer valid. In yet other implementations, the information includes the number of goods or services eligible for a discount using the electronic coupon. By way of

example and not limitation, the electronic coupon may be valid for discounts on up to three (3) bottles of a pain reliever. Alternatively, the electronic coupon may only be used when ten (10) car washes are purchased at the same time.

In certain implementations, the information also includes a bar code identifying the item or type of item for which the electronic coupon is valid. In such an implementation, the bar code is rendered on print-out 206 using a printer connected to computer system 208. The bar code may later be scanned by a scanner of a POS terminal to identify the item being purchased that is eligible for a discount using the electronic coupon. Print-out 206 also serves as a reminder to consumer 202 of which electronic coupons are stored on coupon card 204.

In certain implementations, print-out 206 includes advertisements. In certain implementations, print-out 206 additionally includes information regarding soon-to-be-available electronic coupons.

Once the information relating to the selected electronic coupon is downloaded to computer system 208, the account identifier is written to a coupon card 204 using card read-write device 216. In certain implementations, card read-write device 216 is attached as a peripheral to computer system 208. In certain implementations, card read-write device 216 is a memory card reader and writer. In such an implementation, coupon card 204 can be a smart card and the account identifier is stored in the memory of an embedded chip in the smart card. In certain implementations, coupon card 204 is a contact smart card having a contact area that when inserted into card read-write device 216 so as to make contact with electrical connectors capable of writing the information to the card's memory or data storage. In certain implementations, coupon card 204 is a contactless smart card in which the chip communicates wirelessly with card read-write device 216, such as through near-field communications or radio-frequency identification (RFID) induction technologies.

In certain implementations, card read-write device 216 is a magnetic card reader and writer. In such an implementation, coupon card 204 has a magnetic data stripe. The account identifier is stored on coupon card 204 when the magnetic data stripe is placed in physical contact with a read-write head of card read-write device 216.

In certain implementations, coupon card 204 includes both an embedded chip and a magnetic stripe, each of which can be written to by a peripheral device to computer 208 and/or by a POS at a merchant where the coupon card 204 is used to conduct a discount transaction. In other implementations, coupon card 204 also has the functionality of a portable consumer device, such as a credit card, debit card, prepaid card, loyalty card or other such device associated with

an account of consumer 202. In such implementations, consumer 202 may use coupon card 204 to both receive a discount as well as to pay the residual balance of the discounted transaction.

In the illustrated implementation of FIG. 2-US4, consumer 202 may also associate coupon card 204 with at least one electronic coupon using a dual range, web-enabled cellular telephone 210, where coupon card 204 is a smart card. In such implementations, consumer 202 uses cellular telephone 210 to connect to the World Wide Web, or other network, and browse to a website having electronic coupons. Upon selecting an electronic coupon, the associated information is downloaded to cellular telephone 210, including the account identifier for the third-party sponsoring the electronic coupon.

In such implementations where the information downloaded also includes a bar code, the bar code is capable of being rendered on the display of cellular telephone 210. The bar code can later be scanned by a scanner at a POS terminal to identify the type of item eligible for a discount using the electronic coupon.

Once the information relating to the selected electronic coupon is downloaded to cellular telephone 210, the account identifier associated with the sponsor of the electronic coupon is written to coupon card 204 using a moblet stored on cellular telephone 210. The moblet can include functionality for a near field communication (NFC) card read-write device capable of using NFC, or other short range wireless communication protocol, to read and write data to the memory of coupon card 204.

In the illustrated implementation of FIG. 2-US4, consumer 202 may also associate a coupon card 204 with at least one electronic coupon using a kiosk 214. Kiosk 214 is connected to a database (not shown) capable of storing and relating information regarding the available electronic coupons. In one implementation, a third-party offering at least one electronic coupon has access to the database and may send to and receive from the database information such as the number of electronic coupons used, the number of electronic coupons remaining, or any other relevant information.

When using kiosk 214, consumer 202 is presented with a user interface displaying a plurality of electronic coupons and uses an input device to make a selection. In one implementation, consumer 202 then receives from kiosk 214 a coupon card 204. In such an implementation, kiosk 214 includes a stack of blank coupon cards which may be dispensed by the kiosk 214 to consumer 202 after being electronically enhanced with the consumer's selected coupons. In other implementations, consumer 202 obtains coupon card 204 and provides it to kiosk 214 via a card receiving device to have the selected electronic coupons stored thereon. In such implementations, consumer 202 may purchase coupon card 204 from a merchant (e.g., a

pre-paid card). In other implementations, consumer 202 may receive coupon card 204 from the third-party, a merchant, or any other entity having an interest in providing electronic coupons. In yet other implementations, coupon card 204 is also a portable consumer device and is issued by an issuer to consumer 202 (i.e., the consumer's debit or credit card).

In using kiosk 214 to associate coupon card 204 with at least one electronic coupon, kiosk 214 stores information relating to the electronic coupon selected by consumer 202 on coupon card 204, including the account identifier associated with an account of the electronic coupon sponsor.

In those implementations where the selected electronic coupon is also associated with a bar code identifying the type of item for which the electronic coupon is valid, kiosk 214 additionally dispenses to the consumer 202 a print-out 206 having the bar code printed thereon. The print-out may later be scanned by a scanner at a POS terminal.

Within the exemplary payment processing system depicted in FIG. 1-US, FIG. 4-US4 illustrates the general environment wherein a coupon card, such as coupon card 302 (FIG. 3-US) obtained by the process described in connection with FIG. 2-US4, may be used by a consumer at a POS terminal to obtain a discount on the purchase of goods and services. To start, at POS terminal 422, consumer 402 presents to merchant 410 coupon card 414 along with the item(s) consumer 402 wishes to purchase. As will be understood by a person of ordinary skill in the art, a POS terminal is a type of computerized cash register that manages the selling process and provides a user interface for the cashier. By way of example and not limitation, POS terminals can include the ability to record and track customer orders, process credit and debit cards, connect to other systems in a network, manage inventory, implement loyalty programs, and create and print vouchers. Generally speaking, a POS terminal includes a personal computer having application-specific programs stored thereon to perform the various functions the POS terminal is capable of. Additionally, a POS terminal typically includes I/O (input/output) devices specific to particular environment in which it is being used. Further, POS terminals are often web-enabled.

In the illustrated implementation of FIG. 4-US4, Merchant 410 uses a card reader associated with POS terminal 422 to read the information stored on coupon card 414, including the account identifier associated with electronic coupon sponsor 412. In certain implementations, coupon card 414 is read by swiping coupon card 414 through POS terminal 422. In other implementations, POS terminal 422 reads coupon card 414 using a contactless technology, such as RFID, when consumer 402 is near POS terminal 422. In yet other implementations, to be read, coupon card 414 is inserted into POS terminal 422 such that

external contacts on coupon card 414 establish connectivity with POS terminal 422. In certain implementations, the card reader is physically part of POS terminal 422. In other implementations, the card reader is a peripheral device in communication with POS terminal 422.

In certain implementations, other information is also read from coupon card 414, such as, by way of example and not limitation, an expiration date, an item type, or an item quantity. In such implementations, POS terminal 422 may determine whether the electronic coupon is valid for the item being purchased. This may occur, by way of example and not limitation, by comparing the current date with the expiration data of the electronic coupon. Alternatively, POS terminal 422 may determine whether consumer 402 has purchased the quantity of the discounted item specified. POS terminal 422 may also verify whether consumer 402 has actually purchased the item or item type for which the electronic coupon is applicable.

In certain implementations, POS terminal 422 calculates the discount amount. This may occur, by way of example and not limitation, where the discount is valid for the purchase of multiple items. In such an implementation, POS terminal 422 may calculate the discount amount by multiplying the discount per item by the number of items purchased.

In one implementation, consumer 402 additionally provides print-out 420 to merchant 410. Print-out 420 has a bar code printed thereon that identifies the item eligible for a discount using the electronic coupon stored on coupon card 414. In such an implementation, the bar code is scanned with a scanner associated with POS terminal 422 to identify the item that is eligible for the discount. In certain implementations, the scanner is physically integrated into POS terminal 422. In other implementations, the scanner is a peripheral device in communication with POS terminal 422.

In certain implementations, merchant 410 may additionally enter the amount of the discount into POS terminal 422. In such implementations, the discount amount may be printed on print-out 420. In other implementations, the discount amount is read by POS terminal 422 from coupon card 414.

Upon receipt of coupon card 414, the transaction is processed similarly to the method previously described in connection with FIG. 1-US. Merchant 410 submits an authorization request to acquirer 408 via POS terminal 422, which includes the account identifier read from coupon card 414. In certain implementations, the authorization request may additionally include an account identifier associated with consumer 402 where consumer 402 has paid for the purchase using a credit card, debit card, or other portable consumer device.

Where acquirer 408 is not the same entity as issuer 404, acquirer 408 forwards the transaction information to a transaction handler 406, who in turn forwards it to issuer 404 to verify that the account associated with electronic coupon sponsor 412 contains sufficient funds to reimburse merchant 410 for the discount. Upon receipt of a reply from issuer 404, transaction handler 406 forwards an authorization response to acquirer 408, who forwards it to POS terminal 422 of merchant 410. Where the authorization response contains an approval of the use of the electronic coupon, consumer 402 is given a discount on the retail purchase price of the item.

In certain implementations, merchant 410 operates the POS terminal 422 to decrease the stored availability of the coupon card for future discounts according to the discount being given at the POS. In other implementations, the POS terminal 422 invalidates or deletes the electronic coupon stored on coupon card 414 using POS terminal 422 once the discount has been applied. In certain implementations, coupon card 414 may be a one-time use card. In such an implementation, merchant 410 may forgo returning coupon card 414 to consumer 402. In other implementations, coupon card 414 may be used to store subsequent electronic coupons and therefore is returned to consumer 402, for instance where the coupon card 414 also has functionality of being the consumer's debit or credit card.

In certain implementations, approval of the transaction may be more involved. In such implementations, the authorization request includes additional information, by way of example and not limitation, the item, the item type, and/or the sponsor of the electronic coupon. In one implementation, database 416 may be used to, by way of example and not limitation, verify that electronic coupon sponsor 412 has issued the electronic coupon consumer 402 is attempting to use. In such an implementation, the authorization process may include comparing the additional information provided against information stored in database 416. In other implementations, database 416 is used to keep a tally of the electronic coupons used by consumers. In such an implementation, this information may then be used by electronic coupon sponsor 412 in deciding future electronic coupons to issue or for identifying specific consumers for targeted advertising. In still other implementations, the additional information includes an identifier for the advertisement that was presented to consumer 402 with the electronic coupon being used. In such an implementation, electronic coupon sponsor 412 may charge another entity a fee for each time the advertisement is shown to consumers. Alternatively, electronic coupon sponsor 412 may change the advertisement associated with an electronic coupon after the advertisement has been presented with the electronic coupon a given number of times.

In other implementations, database 418 is used. Database 418 may contain information regarding the account issued to each coupon sponsor 412(r), where electronic coupon sponsor

412(r) is one of up to 'R' coupon sponsors. In such implementations, database 418 may be used to verify that the account identifier read from coupon card 414 is associated with one of the 'R' electronic coupon sponsors. Database 418 may additionally be used to verify that the associated account contains funds sufficient to reimburse merchant 410 for the discount applied.

When merchant 410 submits the transaction to payment processing system 400 via POS terminal 422 for clearing and settlement, the account of electronic coupon sponsor 412 is debited for the cost of the discount. Specifically, merchant 410 submits a request for payment to acquirer 408. Where acquirer 408 is not the same entity as issuer 404, acquirer 408 forwards the request to transaction handler 406. Transaction handler 406 in turn requests payment for the discount from issuer 404, where issuer 404 is the issuer of the account associated with electronic coupon sponsor 412. Issuer 404 debits the account and forward the payment to transaction handler 406 who forwards the payment to acquirer 408. Finally, acquirer 408 credits the account of merchant 410 with the amount of the discount.

As will be understood by a person of ordinary skill in the art, the process described in connection with FIG. 4-US4 is equally applicable to the situation where a consumer uses a coupon card having multiple electronic coupons stored thereon to receive a discount on several items. In such a situation, the electronic coupons may be provided by different electronic coupon sponsors having accounts issued by different issuers. Further, it will be clear to a person of ordinary skill in the art that a coupon card may have multiple electronic coupons stored thereon that are valid at different merchants, each having a different acquirer.

Turning now to FIG. 5-US4, a flow chart of an exemplary method used by a POS terminal to process an electronic coupon stored on a coupon card is presented. To start, as indicated by block 502, an electronic coupon, a bar code identifying an item or type of item eligible for a discount, and an account identifier for an account associated with the coupon sponsor is received by the POS terminal. Next, the POS terminal receives the SKU/UPC (Stock-Keeping Unit/Universal Product Code) for an item that is being purchased, as indicated by block 504. As indicated by block 506, the POS terminal compares the SKU/UPC with the bar code and verifies that electronic coupon provides a discount on the item or type of item being purchased and therefore the electronic coupon should be processed.

As indicated by block 508, a transmission is formed by the POS terminal that includes the account identifier and is addressed to a transaction handler. The transmission requests authorization of the electronic coupon, wherein approval will result in a discount being applied to the purchase price of the item. Upon the receipt of an authorization response that includes such an approval, the discount is applied to the purchase price of the item, as indicated by block

510. Payment is then received from the customer for the amount of the purchase price less the discount, as indicated by block 512. Finally, as indicated by block 514, the POS terminal clears and settles the transaction, wherein the clearing and settlement process causes the account of the electronic coupon sponsor to be debited and the account of the merchant to be credited for the amount of the discount applied to the purchase price of the item.

In certain implementations, individual blocks described above may be combined, eliminated, or reordered. In certain implementations, instructions are encoded in computer readable medium wherein those instructions are executed by a processor to perform one or more of the blocks 502, 504, 506, 508, 510, 512, and 514 recited in FIG. 5-US4. In yet other implementations, the invention includes instructions residing in any other computer program product, where those instructions are executed by a computer external to, or internal to, a computing system to perform one or more of the blocks 502, 504, 506, 508, 510, 512, and 514 recited in FIG. 5-US4.

As an example of how the described coupon card may used, a consumer may take a coupon card with them to the grocery store, where the coupon card has at least one coupon stored thereon. At the check-out counter, the consumer provides the coupon card and a print-out of bar codes to the cashier. The cashier swipes the magnetic strip of the coupon card through the POS terminal and scans the bar codes on the print-out. The cashier then scans the SKU/UPCs for each item the consumer is purchasing. The POS terminal determines if the electronic coupons apply to any of the items by comparing the bar codes with the scanned SKU/UPCs. For example, the coupon card may contain multiple electronic coupons, one of which is for a discount on bread and is provided by the manufacturer of the bread. Another electronic coupon, that is provided by the grocery store, may be for a discount on pet food. When the POS terminal receives the SKU/UPCs for a loaf of bread and a bag of pet food, the POS terminal requests authorization to apply a discount to the items. The authorization request is, for example, received by the grocery store's acquirer.

As the acquirer is the issuer of the account associated with the grocery store, the acquirer verifies if the account has been credited with sufficient funds to pay for the discount on the pet food and sends an authorization response to the POS terminal. The request for authorization to apply a discount to the bread is forwarded by the acquirer to a transaction handler for processing. The transaction handler in turn may forward a request to the issuer of the manufacturer's account for verification that the account contains sufficient funds. Upon receiving a response, the transaction handler may send an authorization response authorizing the application of the discount to the bread.

Once the POS terminal receives the authorization responses for both coupons, the discounts are applied. The consumer may then use the coupon card to pay for the items, where the coupon card is associated with an account of the consumer's, or the consumer may use an alternative payment method.

Implementation F: Figures 1-US, 2-US5, 3-US, 4-US5 and 5-US5.

In one implementation, a transaction handler receives, from a merchant's acquirer, an authorization request for a discount to a purchase. The discount is associated with an electronic coupon stored on a portable consumer device. The electronic coupon is associated with a sponsor account issued to a sponsor of a discount and has been received by the merchant to give the discount on a purchase by a consumer. The discount is to be debited from the sponsor account and credited to an account of the merchant. The first authorization request includes the sponsor account and a discount amount. The transaction handler sends the first authorization request to the issuer of the sponsor account, receives a first authorization back, and sends it to the merchant's acquirer. If the first authorization response includes an approval, a payment request is sent to the issuer of the sponsor account to deduct the discount from the sponsor account.

In reference to Figs. 1-US, 2-US5, 3-US, 4-US5 and 5-US5, FIG. 2-US5 illustrates an exemplary block diagram depicting a consumer using a kiosk that associates a coupon card with at least one electronic coupon that the consumer has selected, by use of the kiosk, that may be used to obtain a discount on the purchase of goods and services by the consumer from a merchant. Although the implementation is discussed in regards to a substantially planar laminated card, one skilled in the art will recognize that other forms of transaction tokens (i.e., portable consumer payment devices) could be used in the disclosed method.

In the illustrated implementation of FIG. 2-US5, consumer 202 may associate a coupon card 204 with at least one electronic coupon using several methods. In one implementation, consumer 202 uses a web-enabled computer system 208 to connect to the World Wide Web, the Internet, or other network, and browse to a website having electronic coupons available for downloading as facilitated by a web service . In such an implementation, consumer 202 uses the browser to select at least one of the electronic coupons offered. Information relating to that electronic coupon is then downloaded to computer system 208, including an account identifier for the party offering, and willing to pay for the discount provide by, the electronic coupon.

In certain implementations, the information further includes the type of product or service, or category thereof, for which the electronic coupon is valid. By way of example and not limitation, the electronic coupon may be valid for all cleaning products made by a particular

manufacturer. Alternatively, the electronic coupon may be valid for a specific dish soap made by the manufacturer.

In other implementations, the information also includes a merchant or manufacturer with which the electronic coupon is valid. In such an implementation, the electronic coupon may only be valid for use with a particular merchant or only for the purchase of a particular manufacturer's product. In other implementations, the information includes an expiration date, after which the electronic coupon is no longer valid. In yet other implementations, the information includes the number of goods or services eligible for a discount using the electronic coupon. By way of example and not limitation, the electronic coupon may be valid for discounts on up to three (3) bottles of a pain reliever. Alternatively, the electronic coupon may only be used when ten (10) car washes are purchased at the same time.

In certain implementations, the information also includes a bar code identifying the item or type of item for which the electronic coupon is valid. In such an implementation, the bar code is rendered on a print out 206 using a printer connected to computer system 208. The bar code may later be scanned by a scanner of a POS terminal to identify the item being purchased that is eligible for a discount using the electronic coupon.

Print out 206 includes a scannable copy of the bar code such that it may be later scanned by a scanner at a POS terminal to identify the type of item eligible for a discount using the electronic coupon. Print out 206 also serves as a reminder to consumer 202 of which electronic coupons are stored on coupon card 204.

In certain implementations, print out 206 includes advertisements. In certain implementations, print out 206 additionally includes information regarding soon-to-be-available electronic coupons.

Once the information relating to the selected electronic coupon is downloaded to computer system 208, the account identifier is written to a coupon card 204 using card read-write device 216. In certain implementations, card read-write device 216 is attached as a peripheral to computer system 208. In certain implementations, card read-write device 216 is a memory card reader. In such an implementation, coupon card 204 is a smart card and the account identifier is stored in the memory of an embedded chip. In certain implementations, coupon card 204 is a contact smart card having a contact area that when inserted into card read-write device 216 makes contact with electrical connectors capable of writing the information to memory. In certain implementations, coupon card 204 is a contactless smart card in which the chip communicates with card read-write device 216 through radio-frequency identification (RFID) induction technology.

In certain implementations, card read-write device 216 is a magnetic card reader. In such an implementation, coupon card 204 has a magnetic data stripe. The account identifier is stored on coupon card 204 when the magnetic data stripe is placed in physical contact with a read-write head of card read-write device 216.

In certain implementations, coupon card 204 includes both an embedded chip and a magnetic stripe. In other implementations, coupon card 204 is also a portable consumer device, such as a credit card, debit card, prepaid card, loyalty card or other such device associated with an account of consumer 202. In such implementations, consumer 202 may use coupon card 204 to both receive a discount and pay for the item.

In the illustrated implementation of FIG. 2-US5, consumer 202 may also associate coupon card 204 with at least one electronic coupon using a dual range (i.e., long range wireless communications and short range wireless communications), web-enabled cellular telephone 210, where coupon card 204 is a smart card. In such implementations, consumer 202 uses the cellular telephony functionality of cellular telephone 210 to connect to the Internet or World Wide Web and browse to a website having electronic coupons provided by a web service. Upon selecting an electronic coupon, the associated information is downloaded to cellular telephone 210, including the account identifier for the third-party sponsoring the electronic coupon.

In such implementations where the information downloaded also includes a bar code, the bar code is capable of being rendered on the display of cellular telephone 210. The bar code can later be scanned by a scanner at a POS terminal to identify the type of item eligible for a discount using the electronic coupon.

Once the information relating to the selected electronic coupon is downloaded to cellular telephone 210, the account identifier associated with the sponsor of the electronic coupon is written to coupon card 204 using a moblet stored on cellular telephone 210. The moblet is executed to provide functionality to short range wireless communication that writes to the memory of coupon card 204, such as via a near field communication (NFC) card read-write application capable of using wireless NFC to read and write data to the memory of coupon card 204.

In the illustrated implementation of FIG. 2-US5, consumer 202 may also associate a coupon card 204 with at least one electronic coupon using a kiosk 214. Kiosk 214 is in communication with a database (not shown), preferably kept in one or more device storage devices, capable of storing and relating information regarding the available electronic coupons. In one implementation, a third-party offering at least one electronic coupon has access to the database and may send to and receive from the database information such as the number of

electronic coupons used, the number of electronic coupons remaining, or any other relevant information.

When using kiosk 214, consumer 202 is presented with a user interface displaying a plurality of electronic coupons and uses an input device to make a selection. In one implementation, consumer 202 then receives from kiosk 214 a coupon card 204. In such an implementation, kiosk 214 includes a stack of blank coupon cards which may be issued to consumer 202. In other implementations, consumer 202 obtains coupon card 204 and provides it to kiosk 214 via a card receiving device to have the selected electronic coupons stored thereon. In such implementations, consumer 202 may purchase coupon card 204 from a merchant. In other implementations, consumer 202 may receive coupon card 204 from the third-party, a merchant, or any other entity having an interest in providing electronic coupons. In yet other implementations, coupon card 204 is also a portable consumer device and is issued by an issuer to consumer 202 (i.e., the consumer's credit, debit, gift, or pre-paid card).

In using kiosk 214 to associate coupon card 204 with at least one electronic coupon, kiosk 214 stores information relating to the electronic coupon selected by consumer 202 on coupon card 204, including the account identifier associated with an account of the electronic coupon sponsor.

In those implementations where the selected electronic coupon is also associated with a bar code identifying the type of item for which the electronic coupon is valid, kiosk 214 additionally dispensed to consumer 202 a print out 206 having the bar code printed thereon. The print out may later be scanned by a scanner at a POS terminal, as would a typical coupon.

Within the exemplary payment processing system depicted in FIG. 1-US, FIG. 4-US5 illustrates the general environment wherein a coupon card, such as coupon card 302 (FIG. 3-US) obtained by the process described in connection with FIG. 2-US5, is used by a consumer to receive a discount on the purchase of goods and services. To start, at POS terminal 422, consumer 402 presents to merchant 410 coupon card 414 along with the item(s) consumer 402 wishes to purchase. Merchant 410 uses a card reader associated with POS terminal 422 to read the information stored on coupon card 414, including the account identifier associated with electronic coupon sponsor 412. In certain implementations, coupon card 414 is read by swiping coupon card 414 through POS terminal 422 to read data magnetically encoded in its magnetic stripe. In other implementations, POS terminal 422 reads coupon card 414 using a contactless technology, such as RFID, when consumer 402 is near POS terminal 422. In yet other implementations, to be read, coupon card 414 is inserted into POS terminal 422 such that external contacts on coupon card 414 establish connectivity with POS terminal 422.

In certain implementations, other information is also read from coupon card 414, such as, by way of example and not limitation, an expiration date, an item type, or an item quantity. In such implementations, POS terminal 422 may determine whether the electronic coupon is valid for the item being purchased. This may occur, by way of example and not limitation, by comparing the current date with the expiration data of the electronic coupon. Alternatively, POS terminal 422 may determine whether consumer 402 has purchased the quantity of the discounted item specified. POS terminal 422 may also verify whether consumer 402 has actually purchased the item or item type for which the electronic coupon is applicable.

In one implementation, consumer 402 additionally provides print out 420 to merchant 410. Print out 420 has a bar code printed thereon that identifies the item eligible for a discount using the electronic coupon stored on coupon card 414. In such an implementation, the bar code is scanned with a scanner associated with POS terminal 422 to identify the item that is eligible for the discount.

In certain implementations, merchant 410 may additionally enter the amount of the discount into POS terminal 422. In such implementations, the discount amount may be printed on print out 420. In other implementations, the discount amount is read by POS terminal 422 from coupon card 414. In certain implementations, POS terminal 422 calculates the discount amount. This may occur, by way of example and not limitation, where the discount is valid for the purchase of multiple items. In such an implementation, POS terminal 422 may calculate the discount amount by multiplying the discount per item by the number of items purchased.

Upon receipt of coupon card 414, the transaction is processed similarly to the method previously described in connection with FIG. 1-US. Merchant 410 submits an authorization request to acquirer 408 via POS terminal 422, which includes the account identifier read from coupon card 414.

In certain implementations, the authorization request may additionally include an account identifier associated with consumer 402 where consumer 402 has paid for the purchase using a credit card, debit card, or other portable consumer device.

Where acquirer 408 is not the same entity as issuer 404, acquirer 408 forwards the transaction information to a transaction handler 406, who in turn forwards it to issuer 404 to verify that the account associated with electronic coupon sponsor 412 contains sufficient funds to reimburse merchant 410 for the discount.

Upon receipt of a reply from issuer 404, transaction handler 406 forwards an authorization response to acquirer 408, who forwards it to POS terminal 422 of merchant 410.

Where the authorization response contains an approval of the use of the electronic coupon, consumer 402 is given a discount on the retail purchase price of the item.

In certain implementations, merchant 410 invalidates or deletes the electronic coupon(s) stored on coupon card 414 using POS terminal 422 once the discount has been applied. In certain implementations, coupon card 414 may be a one-time use card. In such an implementation, merchant 410 may forgo returning coupon card 414 to consumer 402. In other implementations, coupon card 414 may be used to store subsequent electronic coupons and therefore is returned to consumer 402.

In certain implementations, approval of the transaction may be more involved. In such implementations, the authorization request includes additional information, by way of example and not limitation, the item, the item type, and/or the sponsor of the electronic coupon. In certain implementations this information is forwarded by transaction handler 406 to coupon processor 424 for processing. In one implementation, database 416 may be used to, by way of example and not limitation, verify that electronic coupon sponsor 412 has issued the electronic coupon consumer 402 is attempting to use. In such an implementation, the authorization process may include a comparison, performed by coupon processor 424, of the additional information provided against information stored in database 416. In yet other implementations, coupon processor 424 adds a notation to a coupon stored in database 416 once it has been used by a consumer, thereby preventing the coupon from being used more than once. Coupon processor 424 may have direct access to database 416 or may access database 416 via transaction handler 406.

In other implementations, coupon processor 424 uses database 416 to keep a tally of the electronic coupons used by consumers. In such an implementation, this information is used by electronic coupon sponsor 412 in deciding future electronic coupons to issue or for identifying specific consumers for targeted advertising. In still other implementations, the additional information includes an identifier for the advertisement that was presented to consumer 402 with the electronic coupon being used. In such an implementation, after the information is stored in database 416 by coupon processor 424, electronic coupon sponsor 412 may charge another entity a fee for each time the advertisement is shown to consumers. Alternatively, electronic coupon sponsor 412 may change the advertisement associated with an electronic coupon after the advertisement has been presented with the electronic coupon a given number of times.

In other implementations, database 418 is used. As with database 416, coupon processor 424 may access database 418 directly or via transaction handler 406. Database 418 may contain information regarding the account issued to each coupon sponsor 412(r), where electronic

coupon sponsor 412(r) is one of (R) coupon sponsors. In such implementations, coupon processor 424 uses database 418 to verify that the account identifier read from coupon card 414 is associated with one of the (R) electronic coupon sponsors. Database 418 may additionally be used to verify that the associated account contains funds sufficient to reimburse merchant 410 for the discount applied.

In certain implementations, coupon processor 424 is the same entity as transaction handler 406. In other implementations, coupon processor 424 is a separate entity from transaction handler 406.

When merchant 410 submits the transaction to payment processing system 400 via POS terminal 422 for clearing and settlement, the account of electronic coupon sponsor 412 is debited for the cost of the discount. Specifically, merchant 410 submits a request for payment to acquirer 408. Where acquirer 408 is not the same entity as issuer 404, acquirer 408 forwards the request to transaction handler 406. Transaction handler 406 in turn requests payment for the discount from issuer 404, where issuer 404 is the issuer of the account associated with electronic coupon sponsor 412. Issuer 404 debits the account and forward the payment to transaction handler 406 who forwards the payment to acquirer 408. Finally, acquirer 408 credits the account of merchant 410 with the amount of the discount.

In certain implementations, the clearing and settlement process may involve coupon processor 424. In such an implementation, coupon processor 424 may, by way of example and not limitation, record each electronic coupon that has been cleared and settled. This record may be kept in database 416 or in another separate database. Alternatively or in addition to, coupon processor may verify that the electronic coupon was used in the transaction being cleared and settled. In yet other implementations, coupon processor 424 may determine the account associated with coupon sponsor 412 in order that transaction handler 406 may request issuer 404 debit that account. In such implementations, coupon processor 424 may access database 418.

As will be understood by a person of ordinary skill in the art, the process described in connection with FIG. 4-US5 is equally applicable to the situation where a consumer uses a coupon card having multiple electronic coupons stored thereon to receive a discount on several items. In such a situation, the electronic coupons may be provided by different electronic coupon sponsors having accounts issued by different issuers. Further, it will be clear to a person of ordinary skill in the art that a coupon card may have multiple electronic coupons stored thereon that are valid at different merchants, each having a different acquirer.

Turning now to FIG. 5-US5, a flow chart of an exemplary method used by a transaction handler to process an electronic coupon stored on a coupon card is presented. As indicated by

block 502, the transaction handler receives an authorization request from a merchant, requesting authorization to apply a discount associated with an electronic coupon to a transaction. Upon receipt of the request, the transaction handler matches the account identifier included in the request with the account identifier associated with the electronic coupon sponsor, as indicated by block 504. In certain implementations, the matching is performed by a coupon processor. In such implementations the coupon processor may be a separate entity from the transaction handler. In certain implementations, if the account identifier included in the request does not match the account identifier associated with the electronic coupon sponsor, the transaction handler sends an authorization response to the merchant containing a denial of the coupon. In such an implementation, the process may end.

In the illustrated implementation of FIG. 5-US5, the transaction handler next sends a request to the issuer of the account associated with the electronic coupon sponsor requesting verification that the account contains sufficient funds to reimburse the merchant for the discount, as indicated by block 506. As indicated by block 508, upon receipt of a response from the issuer, the transaction handler sends a response to the merchant. Where the issuer confirms that the account contains sufficient funds, the authorization request may contain an approval. Finally, as indicated by block 510, the transaction handler clears and settles the transaction by requesting that the issuer debit the account of the electronic coupon sponsor and an acquirer for the merchant credit the merchant's account for the discount applied.

In certain implementations, individual blocks described above may be combined, eliminated, or reordered. In certain implementations, instructions are encoded in computer readable medium wherein those instructions are executed by a processor to perform one or more of the blocks 502, 504, 506, 508, and 510 recited in FIG. 5-US5. In yet other implementations, instructions reside in any other computer program product, where those instructions are executed by a computer external to, or internal to, a computing system to perform one or more of the blocks 502, 504, 506, 508, and 510 recited in FIG. 5-US5. In either case the instructions may be encoded in a computer readable medium comprising, for example, a magnetic information storage medium, an optical information storage medium, an electronic information storage medium, and the like. "Electronic storage media," may mean, for example and without limitation, one or more devices, such as and without limitation, a PROM, EPROM, EEPROM, Flash PROM, compactflash, smartmedia, and the like.

As an example of how the described coupon card may used, a consumer may take a coupon card with them to the grocery store, where the coupon card has at least one coupon stored thereon. At the check-out counter, the consumer provides the coupon card and a print out of bar

codes to the cashier. The cashier swipes the magnetic strip of the coupon card through the POS terminal and scans the bar codes on the print out. The cashier then scans the SKU/UPCs for each item the consumer is purchasing. The POS terminal determines if the electronic coupons apply to any of the items by comparing the bar codes with the scanned SKU/UPCs. For example, the coupon card may contain multiple electronic coupons, one of which is for a discount on bread and is provided by the manufacturer of the bread. Another electronic coupon, provided by the grocery store, may be for a discount on pet food. When the POS terminal receives the SKU/UPCs for a loaf of bread and a bag of pet food, the POS terminal requests authorization to apply a discount to the items. The authorization request is, for example, received by the grocery store's acquirer.

As the acquirer is the issuer of the account associated with the grocery store, the acquirer verifies if the account has been credited with sufficient funds to pay for the discount on the pet food and sends an authorization response to the POS terminal. The request for authorization to apply a discount to the bread is forwarded by the acquirer to a transaction handler for processing. The transaction handler in turn may forward a request to the issuer of the manufacturer's account for verification that the account contains sufficient funds. Upon receiving a response, the transaction handler may send an authorization response authorizing the application of the discount to the bread.

Once the POS terminal receives the authorization responses for both coupons, the discounts are applied. The consumer may then use the coupon card to pay for the items, where the coupon card is associated with an account of the consumer's, or the consumer may use an alternative payment method.

Additional Exemplary Implementations

Various examples of implementations are set forth in the following paragraphs each of which corresponds, as indicted below, to a US patent application incorporated herein by reference in the paragraph above labeled "Cross-Reference To Related Applications" and each being enabled by the disclosure of the specification and drawings of this application.

Exemplary implementations corresponding to U.S. Patent Application Serial No. 12/545,372, filed on August 21, 2009, by Karen Cervenka, titled Free Sample Coupon Card:

1. A portable coupon payment device comprising:

a substrate having surface with an image rendering thereon that corresponds to a free sample;

and

memory, in contact with the substrate, having data encoded therein including:

an identifier for the free sample; and

a quantity for the free sample;

a sponsor company account for a selling merchant to charge the cost of the free sample for payment to a selling merchant account to reimburse the selling merchant for the free sample;

an image corresponding to the free sample; and

an identifier for a coupon provider donating the free sample to a consumer.

2. The portable coupon payment device as defined in Exemplary Implementation No. 1, wherein:

the sponsor company account is a type of consumer account issued by an issuer to a sponsor company;

the portable coupon payment device is a type of a portable coupon payment device that is associated with a consumer account for a consumer to engage in a plurality of transactions on the consumer account with a plurality of merchants in a payment processing network;

the payment processing network includes a plurality of merchants and consumers engaging in a plurality of transactions on a plurality of respective consumer accounts that respective issuers issue to the consumers; and

each said transaction involves the merchant submitting the transaction to an acquirer for processing by a transaction handler who requests the issuer to obtain payment for the transaction from the consumer account, and wherein the issuer forwards the payment to the transaction handler who forwards the payment to the acquirer to reimburse the merchant for the transaction.

3. The portable coupon payment device as defined in Exemplary Implementation No. 1, wherein the data encoded in the memory further includes an image of a donation for the consumer from the coupon provider.

4. The portable coupon payment device as defined in Exemplary Implementation No. 3, wherein the image of the donation comprises respective images corresponding to:

the identifier for the consumer;

the identifier for the coupon provider of the free sample;

the identifier for the free sample; and

the quantity of the free sample.

5. The portable coupon payment device as defined in Exemplary Implementation No. 1, wherein the image corresponding to the free sample includes a code identifying the free sample and configured for being scanned by a scanner at a Point of Service terminal.

6. The portable coupon payment device as defined in Exemplary Implementation No. 1, wherein the image corresponding to the free sample includes an advertisement selected from the group consisting of: an advertisement for the free sample; an advertisement not for the free sample; an advertisement for the selling merchant; an advertisement for a different product other than the free sample that is also provided by the selling merchant; and a combination of the foregoing.

7. The portable coupon payment device as defined in Exemplary Implementation No. 1, wherein the image corresponding to the free sample includes an advertisement selected from the group consisting of: an advertisement for a merchant geographically proximal to the coupon provider; an advertisement for a merchant geographically proximal to the selling merchant; and a combination of the foregoing.

8. The portable coupon payment device as defined in Exemplary Implementation No. 1, wherein the memory of the portable coupon payment device is selected from the group consisting of: a non-volatile memory of a semiconductor device; a magnetic encoded data region of a magnetic stripe; and a combination of the foregoing.

9. The portable coupon payment device as defined in Exemplary Implementation No. 1, wherein the substrate is a portion of a consumer transaction payment card selected from the group consisting of: a smart card having a Radio Frequency Identification (RFID) tag, a transponder device and a microchip; and a magstripe card; and a combination of the foregoing.

10. The portable coupon payment device as defined in Exemplary Implementation No. 1, further comprising means for the memory to receive the information by a communication selected from the group consisting of a wireless communication, a hardwired communication, and a magnetic encoded communication for track data received by modifying the magnetism of magnetic particles on a band of magnetic material on the portable coupon payment device.

11. The portable coupon payment device as defined in Exemplary Implementation No. 1, wherein data in the memory of the portable coupon payment device further comprises an identifier, a quantity, and a quantity of an item, other than the free sample, being donated by the coupon provider to the consumer.

12. The portable coupon payment device as defined in Exemplary Implementation No. 11, wherein the identifier for the free sample and the identifier for the item, other than the free sample, are both selected from the group consisting of: a Stock Keeping Unit (SKU); a Universal Product Code (UPC); a trademark; a commodity type and a trade name of a provider of the commodity type; an ingredient of the commodity type and the trade name of the provider of the commodity type; and a combination of the foregoing.

13. A portable coupon transaction payment device comprising:

memory, embedded in a substrate, having stored therein:

an identifier and a quantity for each of a plurality of:

a free sample donated by a coupon provider to a consumer; and

a non-sample item each being offered by a corresponding said coupon provider to the consumer;

for each said free sample, a sponsor company account for a selling merchant to charge the cost of the free sample for payment to a selling merchant account to reimburse the selling merchant for the free sample;

an identifier for the consumer;

an identifier for each said coupon provider;

an identifier for a consumer account issued by an issuer to the consumer; and

an identifier to correlate which said donation for the consumer was donated by which said coupon provider, wherein:

the sponsor company account and the consumer account are each an account in a payment processing network by which a consumer can engage in a plurality of transactions on the account with a plurality of merchants in the payment processing network;

the payment processing network includes a plurality of said merchants and said consumers engaging in the plurality of said transactions on a plurality of respective said accounts that respective said issuers issue to the consumers; and

each said transaction involves the merchant submitting the transaction to an acquirer for processing by a transaction handler who requests the issuer to obtain payment for the transaction from the account, wherein the issuer forwards the payment to the transaction handler who forwards the payment to the acquirer to reimburse the merchant for the transaction;

and

means for providing access to the information in the memory.

14. The portable coupon transaction payment device as defined in Exemplary Implementation No. 13, wherein the consumer account issued by the issuer to the consumer is a type selected from the group consisting of a debit account, a credit account, a prepaid account, and a gift card account.

15. The portable coupon transaction payment device as defined in Exemplary Implementation No. 13, wherein the substrate has an image in a surface that the includes representing at least a portion of the information in the memory for being read by the image being scanned by a scanner at a Point of Service terminal.

16. The portable coupon transaction payment device as defined in Exemplary Implementation No. 13, wherein the memory is selected from the group consisting of: a non-volatile memory of a semiconductor device; a magnetic encoded data region of a magnetic stripe; and a combination of the foregoing.

17. The portable coupon transaction payment device as defined in Exemplary Implementation No. 13, wherein the substrate is a portion of a consumer transaction payment card selected from the group consisting of: a smart card having a Radio Frequency Identification (RFID) tag, a transponder device and a microchip; and a magstripe card; and a combination of the foregoing.

18. The portable coupon transaction payment device as defined in Exemplary Implementation No. 13, wherein the information in the memory further includes an image of each said free sample for the consumer that was donated by the corresponding said coupon provider.

19. The portable coupon transaction payment device as defined in Exemplary Implementation No. 18, wherein, for each said image of each said free sample, the free sample in the image is hand written by the coupon provider.

20. The portable coupon transaction payment device as defined in Exemplary Implementation No. 18, further comprising means for the memory to receive the information by a communication selected from the group consisting of a wireless communication, a hardwired communication, and a magnetic encoded communication for track data received by modifying the magnetism of magnetic particles on a band of magnetic material on the portable coupon payment device.

21. The portable coupon transaction payment device as defined in Exemplary Implementation No. 20, wherein, for each said image of each said free sample, the identifier for the coupon provider comprises a handwritten signature of the coupon provider.

22. The portable coupon transaction payment device as defined in Exemplary Implementation No. 18, wherein each said image of each said free sample comprises respective images corresponding to:

the identifier for the consumer;

the identifier for the coupon provider; and

the identifier and the quantity for the free sample; and

the identifier, quantity, and dosage identifier for the non-sample item.

23. A portable coupon transaction payment device comprising:

memory, embedded in a substrate, having information stored therein, wherein:

the substrate has an image on a surface thereof that includes a representation of at least a portion of the information in the memory for being read by the image being scanned by a scanner at a Point of Service terminal:

the information includes:

an identifier and a quantity for each of a plurality of:

a free sample donated by a coupon provider to a consumer; and

a non-sample item offered by a corresponding said coupon provider to the consumer;

an image, having multiple portion, of each said donation for the consumer that was donated by the corresponding said coupon provider, wherein the portions of the image correspond to:

the identifier for the consumer;

the identifier for the coupon provider; and

the identifier and the quantity for the free sample; and

the identifier and the quantity for the non-sample item;

for each said free sample, a sponsor company account for a selling merchant to charge the cost of the free sample for payment to a selling merchant account to reimburse the selling merchant for the free sample; and

an identifier to correlate which said donation for the consumer was donated by which said coupon provider, wherein:

the sponsor company account and the consumer account are each an account in a payment processing network by which a consumer can engage in a plurality of transactions on the account with a plurality of merchants in the payment processing network;

the payment processing network includes a plurality of said merchants and said consumers engaging in the plurality of said transactions on a plurality of respective said accounts that respective said issuers issue to the consumers; and

each said transaction involves the merchant submitting the transaction to an acquirer for processing by a transaction handler

who requests the issuer to obtain payment for the transaction from the account, wherein the issuer forwards the payment to the transaction handler who forwards the payment to the acquirer to reimburse the merchant for the transaction;

and

means for providing access to the information in the memory.

24. The portable coupon transaction payment device as defined in Exemplary Implementation No. 23, wherein the memory is selected from the group consisting of: a non-volatile memory of a semiconductor device; a magnetic encoded data region of a magnetic stripe; and a combination of the foregoing.

25. The portable coupon transaction payment device as defined in Exemplary Implementation No. 23, wherein the substrate is a portion of a consumer transaction payment card selected from the group consisting of: a smart card having a Radio Frequency Identification (RFID) tag, a transponder device and a microchip; and a magstripe card; and a combination of the foregoing.

26. The portable coupon transaction payment device as defined in Exemplary Implementation No. 23, further comprising means for the memory to receive the information by a communication selected from the group consisting of a wireless communication, a hardwired communication, and a magnetic encoded communication for track data received by modifying the magnetism of magnetic particles on a band of magnetic material on the portable coupon payment device.

27. The portable coupon transaction payment device as defined in Exemplary Implementation No. 23, wherein, for each said image of each said donation, the identifier for the coupon provider comprises a handwritten signature of the coupon provider.

28. The portable coupon transaction payment device as defined in Exemplary Implementation No. 23, wherein, for each said image of each said free sample, the free sample in the image is hand written by the coupon provider.

Exemplary implementations corresponding to U.S. Patent Application Serial No. 12/480,268, filed on June 8, 2009, by Karen Cervenka, titled Coupon Card Generation Web Service:

1. A method comprising:

receiving at a web service:

a selection from a web browser of at least one electronic coupon from a database having a plurality of said electronic coupons each:

being associated with a sponsor account issued to a sponsor of a discount by an issuer; and

for being receivable by a merchant to give the discount on a purchase, wherein the discount is to be debited from the sponsor account and credited to a merchant account issued by another said issuer to the merchant to reimburse the merchant for the discount;

and

a specification including:

a rendering capability of a client executing the web browser for rendering a hard copy of the at least one said electronic coupon using a first peripheral device with which the client is in communication;

a type of a portable coupon device, associated with a consumer account issued by another said issuer, and acceptable as payment for a future said purchase to be made on the consumer account;

and

an identifier for the consumer account to be debited for the payment for the future said purchase less the discount;

retrieving, from the database:

a rendering image corresponding to the rendering capabilities of the first peripheral device for the hard copy;

a memory location to store discount information in a memory of the type of the portable coupon device; and

the discount information including an identifier for:

the sponsor account;

the discount amount; and

the purchase that is eligible for the discount from the merchant and including at least one of a good and a service;

and

transmitting to the web browser, via the web service, the rendering image, the memory location, and the discount information.

2. The method as defined in Exemplary Implementation No. 1, further comprising receiving at the web service a communication capability of the client executing the web browser for communicating the discount information to the portable coupon device using a second peripheral device with which the client is in communication.

3. The method as defined in Exemplary Implementation No. 2, further comprising transmitting to the web browser, via the web service, a first instruction to communicate the discount information to the portable coupon device using the second peripheral device.

4. The method as defined in Exemplary Implementation No. 1, further comprising transmitting to the web browser, via the web service, a second instruction to communicate a command, executable by the portable coupon device, to store the discount information in the memory location.

5. The method as defined in Exemplary Implementation No. 1, further comprising transmitting to the web browser, via the web service, a third instruction to render the hard copy of the at least one electronic coupon using the first peripheral device.

6. The method as defined in Exemplary Implementation No. 1, wherein the rendering image includes a barcode identifying the purchase, wherein the barcode is capable of being scanned by a scanner.

7. The method as defined in Exemplary Implementation No. 1, wherein the sponsor account is issued to a member of the group comprising:

the merchant selling the purchase;

a manufacturer of the purchase;

a wholesaler of the purchase; and

a distributor of the purchase.

8. An article of manufacture comprising a computer readable medium comprising computer readable program code disposed therein, the computer readable program code comprising a series of computer readable program steps to effect:

receiving at a web service:

a selection from a web browser of at least one electronic coupon from a database having a plurality of said electronic coupons each:

being associated with a sponsor account issued to a sponsor of a discount by an issuer; and

for being receivable by a merchant to give the discount on a purchase, wherein the discount is to be debited from the sponsor account and credited to a merchant account issued by another said issuer to the merchant to reimburse the merchant for the discount;

and

a specification including:

a rendering capability of a client executing the web browser for rendering a hard copy of the at least one said electronic coupon using a first peripheral device with which the client is in communication;

a type of a portable coupon device, associated with a consumer account issued by another said issuer, and acceptable as payment for a future said purchase to be made on the consumer account;

and

an identifier for the consumer account to be debited for the payment for the future said purchase less the discount;

retrieving, from the database:

a rendering image corresponding to the rendering capabilities of the first peripheral device for the hard copy;

a memory location to store discount information in a memory of the type of the portable coupon device; and

the discount information including an identifier for:

the sponsor account;

the discount amount; and

the purchase that is eligible for the discount from the merchant and including at least one of a good and a service;

and

transmitting to the web browser, via the web service, the rendering image, the memory location, and the discount information.

9. The article of manufacture as defined in Exemplary Implementation No. 8, further comprising computer readable program code comprising a series of computer readable program steps to effect receiving at the web service a communication capability of the client executing the web browser for communicating the discount information to the portable coupon device using a second peripheral device with which the client is in communication.

10. The article of manufacture as defined in Exemplary Implementation No. 9, further comprising computer readable program code comprising a series of computer readable program steps to effect transmitting to the web browser, via the web service, a first instruction to communicate the discount information to the portable coupon device using the second peripheral device.

11. The article of manufacture as defined in Exemplary Implementation No. 8, further comprising computer readable program code comprising a series of computer readable program

steps to effect transmitting to the web browser, via the web service, a second instruction to communicate a command, executable by the portable coupon device, to store the discount information in the memory location.

12. The article of manufacture as defined in Exemplary Implementation No. 8, further comprising computer readable program code comprising a series of computer readable program steps to effect transmitting to the web browser, via the web service, a third instruction to render the hard copy of the at least one electronic coupon using the first peripheral device.

13. The article of manufacture as defined in Exemplary Implementation No. 8, wherein the rendering image includes a barcode identifying the purchase, wherein the barcode is capable of being scanned by a scanner.

14. The article of manufacture as defined in Exemplary Implementation No. 8, wherein the sponsor account is issued to a member of the group comprising:

the merchant selling the purchase;

a manufacturer of the purchase;

a wholesaler of the purchase; and

a distributor of the purchase.

15. An apparatus comprising:

a web service capable of receiving:

a selection from a web browser of at least one electronic coupon from a database having a plurality of said electronic coupons each:

being associated with a sponsor account issued to a sponsor of a discount by an issuer; and

for being receivable by a merchant to give the discount on a purchase, wherein the discount is to be debited from the sponsor account and credited to a merchant account issued by another said issuer to the merchant to reimburse the merchant for the discount;

and

a specification including:

a rendering capability of a client executing the web browser for rendering a hard copy of the at least one said electronic coupon on using a first peripheral device with which the client is in communication;

a type of a portable coupon device, associated with a consumer account issued by another said issuer, and acceptable as payment for a future said purchase to be made on the consumer account;

and

an identifier for the consumer account to be debited for the payment for the future said purchase less the discount;

the database having stored therein:

a rendering image corresponding to the rendering capabilities of the first peripheral device for the hard copy;

a memory location to store discount information in a memory of the type of the portable coupon device; and

the discount information including an identifier for:

the sponsor account;

the discount amount; and

the purchase that is eligible for the discount from the merchant and including at least one of a good and a service;

and

a means for transmitting to the web browser, via the web service, the rendering image, the memory location, and the discount information.

16. The apparatus as defined in Exemplary Implementation No. 15, wherein the web service is further capable of receiving a communication capability of the client executing the web browser for communicating the discount information to the portable coupon device using a second peripheral device with which the client is in communication.

17. The apparatus as defined in Exemplary Implementation No. 15, wherein the means for transmitting is capable of transmitting to the web browser, via the web service, a first instruction to communicate the discount information to the portable coupon device using the second peripheral device.

18. The apparatus as defined in Exemplary Implementation No. 17, wherein the means for transmitting is capable of transmitting to the web browser, via the web service, a second instruction to communicate a command, executable by the portable coupon device, to store the discount information in the memory location.

19. The apparatus as defined in Exemplary Implementation No. 18, wherein the means for transmitting is capable of transmitting to the web browser, via the web service, a third instruction to render the hard copy of the at least one electronic coupon using the first peripheral device.

20. The apparatus as defined in Exemplary Implementation No. 15, wherein the rendering image includes a barcode identifying the purchase, wherein the barcode is capable of being scanned by a scanner.

21. The apparatus as defined in Exemplary Implementation No. 15, wherein the discount information further includes an identification of the merchant, wherein the discount is valid when the purchase is from the merchant.

Exemplary implementations corresponding to U.S. Patent Application Serial No. 12/480,444, filed on June 8, 2009, by Karen Cervenka, titled Coupon Card Kiosk:

1. For a payment processing network that includes a plurality of merchants and consumers engaging in a plurality of transactions on a plurality of respective consumer accounts that respective issuers issue to the consumers, each said transaction involving an electronic coupon associated with a sponsor account issued by an issuer, wherein the merchant submits the transaction to an acquirer for processing by a transaction handler who requests the issuer to obtain payment for a discount applied by the merchant to the transaction from the sponsor account, and wherein the issuer forwards the payment to the transaction handler who forwards the payment to the acquirer to reimburse the merchant for the discount given on the transaction, a method of providing an electronic coupon to a user of a kiosk comprising:

receiving, using an input device of a user interface, a selection of at least one electronic coupon from a database having a plurality of said electronic coupons each:

being associated with a sponsor account issued to a sponsor of a discount by an issuer; and

for being receivable by one said merchant to give the discount on a purchase, wherein the discount is to be debited from the sponsor account and credited to one said merchant account issued by another said issuer to the one said merchant to reimburse the one said merchant for the discount;

retrieving, from the database:

a rendering image corresponding to the rendering capabilities of the kiosk;

a memory location to store discount information in a memory of a type of portable coupon device stored within the kiosk; and

the discount information including an identifier for:

the sponsor account;

a discount amount; and

the purchase eligible for the discount from the one said merchant and including at least one of a good and service;

writing, to the memory location in the memory of the portable coupon device the discount information;

dispensing the portable coupon device;

and

rendering a hard copy of the rendering image.

2. The method as defined in Exemplary Implementation No. 1, further comprising:

receiving a consumer identifier; and

displaying, using the user interface, a portion of the plurality of electronic coupons based upon the consumer identifier.

3. The method as defined in Exemplary Implementation No. 1, wherein said retrieving further comprises connecting to a network, wherein the database is stored on the network.

4. The method as defined in Exemplary Implementation No. 1, wherein the rendering image includes a bar code identifying the purchase, wherein said rendering further comprises printing a print-out of the bar code that is capable of being scanned by a scanner at a Point of Service terminal.

5. The method as defined in Exemplary Implementation No. 1, further comprising displaying, using the user interface, an advertisement associated with at least one of the plurality of electronic coupons.

6. The method as defined in Exemplary Implementation No. 1, wherein the rendering image includes an advertisement to be printed on the portable coupon device, the method further comprising printing the advertisement on the portable coupon device.

7. The method as defined in Exemplary Implementation No. 1, wherein the sponsor account is issued to a member of the group comprising:

the merchant selling the purchase;

a manufacturer of the purchase;

a wholesaler of the purchase; and

a distributor of the purchase.

8. For a payment processing network that includes a plurality of merchants and consumers engaging in a plurality of transactions on a plurality of respective consumer accounts that respective issuers issue to the consumers, each said transaction involving an electronic coupon associated with a sponsor account issued by an issuer, wherein the merchant submits the transaction to an acquirer for processing by a transaction handler who requests the issuer to obtain payment for a discount applied by the merchant to the transaction from the sponsor

account, and wherein the issuer forwards the payment to the transaction handler who forwards the payment to the acquirer to reimburse the merchant for the discount given on the transaction, a kiosk comprising:

a user interface capable of displaying at least one electronic coupon from a database having a plurality of said electronic coupons each:

being associated with a sponsor account issued to a sponsor of a discount by an issuer; and

for being receivable by one said merchant to give the discount on a purchase, wherein the discount is to be debited from the sponsor account and credited to one said merchant account issued by another said issuer to the one said merchant to reimburse the one said merchant for the discount;

an input device capable of receiving a selection of at least one electronic coupon from the database;

a means for retrieving from the database:

a rendering image corresponding to the rendering capabilities of the kiosk;

a memory location to store discount information in a memory of a type of portable coupon device stored within the kiosk; and

the discount information including an identifier for:

the sponsor account;

a discount amount; and

the purchase eligible for the discount from the one said merchant and including at least one of a good and service;

a means for writing, to a memory location in a memory of a portable coupon device, the discount information;

a means for dispensing the portable coupon device;

and

a means for rendering a hardcopy of the rendering image.

9. The kiosk as defined in Exemplary Implementation No. 8, further comprising a means for receiving a consumer identifier for use in displaying, using the user interface, a portion of the plurality of electronic coupons based upon the consumer identifier.

10. The kiosk as defined in Exemplary Implementation No. 8, wherein said means for retrieving includes a means for communicating with a network, wherein the database is stored on the network.

11. The kiosk as defined in Exemplary Implementation No. 8, wherein the rendering image includes a bar code identifying the purchase, wherein the means for rendering is capable of printing a print-out of the bar code that is scannable by a scanner at a Point of Service terminal.

12. The kiosk as defined in Exemplary Implementation No. 8, wherein the user interface is capable of streaming an advertisement associated with at least one of the plurality of electronic coupons.

13. The kiosk as defined in Exemplary Implementation No. 8, further comprising a means for printing an advertisement on the portable coupon device.

14. The kiosk as defined in Exemplary Implementation No. 8, wherein the sponsor account is issued to a member of the group comprising:

the merchant selling the purchase;

a manufacturer of the purchase;

a wholesaler of the purchase; and

a distributor of the purchase.

15. For a payment processing network that includes a plurality of merchants and consumers engaging in a plurality of transactions on a plurality of respective consumer accounts that respective issuers issue to the consumers, each said transaction involving an electronic coupon associated with a sponsor account issued by an issuer, wherein the merchant submits the transaction to an acquirer for processing by a transaction handler who requests the issuer to obtain payment for a discount applied by the merchant to the transaction from the sponsor account, and wherein the issuer forwards the payment to the transaction handler who forwards the payment to the acquirer to reimburse the merchant for the discount given on the transaction, a method of using a kiosk to obtain a portable coupon card having an electronic coupon stored thereon, the method comprising:

selecting, using an input device of a user interface, at least one electronic coupon from a database having a plurality of said electronic coupons:

being associated with a sponsor account issued to a sponsor of a discount by an issuer; and

for being receivable by one said merchant to give the discount on a purchase, wherein the discount is to be debited from the sponsor account and credited to one said merchant account issued by another said issuer to the one said merchant to reimburse the one said merchant for the discount;

and

receiving from the kiosk:

a portable coupon device having discount information stored in a memory, the discount information including an identifier for:

the sponsor account;

a discount amount;

the purchase that is eligible for the discount from the merchant and including at least one of a good and a service;

and

a hard copy of a rendering image corresponding to the rendering capabilities of the kiosk.

16. The method as defined in Exemplary Implementation No. 15, further comprising:

providing a consumer identifier; and

viewing, using the user interface, a portion of the plurality of the electronic coupons based upon the consumer identifier.

17. The method as defined in Exemplary Implementation No. 15, wherein the rendering image includes a bar code identifying the purchase, the method further comprising receiving a print-out of the bar code that is scannable by a scanner at a Point of Service terminal.

18. The method as defined in Exemplary Implementation No. 15, further comprising viewing, using the user interface, an advertisement associated with at least one of the plurality of electronic coupons.

19. The method as defined in Exemplary Implementation No. 15, wherein the sponsor account is issued to a member of the group comprising:

the merchant selling the purchase;

a manufacturer of the purchase;

a wholesaler of the purchase; and

a distributor of the purchase.

20. The method as defined in Exemplary Implementation No. 15, wherein the portable coupon device received includes an advertisement printed on the portable coupon device.

Exemplary implementations corresponding to U.S. Patent Application Serial No. 12/480,529, filed on June 8, 2009, by Karen Cervenka, titled Coupon Card Point Of Service Terminal Processing:

1. For a payment processing network that includes a plurality of merchants and consumers engaging in a plurality of transactions on a plurality of respective consumer accounts

that respective issuers issue to the consumers, each said transaction involving an electronic coupon associated with a sponsor account issued by an issuer, wherein the merchant submits the transaction to an acquirer for processing by a transaction handler who requests the issuer to obtain payment for a discount applied by the merchant to the transaction from the sponsor account, and wherein the issuer forwards the payment to the transaction handler who forwards the payment to the acquirer to reimburse the merchant for the discount given on the transaction, a method of using a point of service terminal (POS) to provide a discount on a purchase to one said consumer comprising:

receiving a portable coupon device that is:

associated with one said consumer account issued by one said issuer, and

acceptable as payment for a future purchase to be made on the consumer account;

and

has a memory, wherein stored on the memory is:

an electronic coupon:

being associated with a sponsor account issued to a sponsor of a discount by one said issuer; and

for being receivable by one said merchant to give the discount on a purchase, wherein the discount is to be debited from the sponsor account and credited to one said merchant account issued by another said issuer to the one said merchant to reimburse the one said merchant for the discount; and

discount information including an identifier for:

the sponsor account;

a discount amount; and

the purchase that is eligible for the discount from the merchant and including at least one of a good and a service;

reading, using a card read/writer of the POS, the discount information from the memory of the portable coupon device;

forming a transmission, at the POS, addressed to an acquirer requesting authorization of the electronic coupon, the transmission including the sponsor account and the discount amount;

receiving an authorization response, at the POS, from the acquirer;

and

operative if the authorization response includes an approval of the electronic coupon:

applying the discount, at the POS, to a cost of the purchase; and

accepting, at the POS, a payment for the cost of the purchase less the discount amount.

2. The method as defined in Exemplary Implementation No. 1, further comprising:

receiving, at the POS, a bar code identifying the purchase; and

scanning, with a scanner of the POS, the bar code.

3. The method as defined in Exemplary Implementation No. 2, further comprising operative if the authorization response includes an approval of the electronic coupon, forming a transmission, at the POS, addressed to the acquirer requesting payment of the discount thereby starting the process of:

debiting the sponsor account for the discount amount; and

crediting the merchant account for the discount amount.

4. The method as defined in Exemplary Implementation No. 3, wherein said accepting further comprises:

reading, using the card read/writer of the POS, an identifier for the consumer account from the portable coupon device; and

forming a transmission, at the POS, addressed to the acquirer requesting payment of the cost of the purchase less the discount amount thereby starting the process of:

debiting the consumer account for the cost of the purchase less the discount amount; and

crediting the merchant account for the cost of the purchase less the discount amount.

5. The method as defined in Exemplary Implementation No. 4, wherein the portable coupon card is a smart card, the method further comprising wirelessly interrogating the smart card.

6. The method as defined in Exemplary Implementation No. 5, further comprising deleting, using the card read/writer of the POS, the electronic coupon from the portable coupon card.

7. The method as defined in Exemplary Implementation No. 6, wherein the sponsor account is issued to a member of the group comprising:

the merchant selling the purchase;

a manufacturer of the purchase;

a wholesaler of the purchase; and

a distributor of the purchase.

8. For a payment processing network that includes a plurality of merchants and consumers engaging in a plurality of transactions on a plurality of respective consumer accounts that respective issuers issue to the consumers, each said transaction involving an electronic coupon associated with a sponsor account issued by an issuer, wherein the merchant submits the transaction to an acquirer for processing by a transaction handler who requests the issuer to obtain payment for a discount applied by the merchant to the transaction from the sponsor account, and wherein the issuer forwards the payment to the transaction handler who forwards the payment to the acquirer to reimburse the merchant for the discount given on the transaction, an article of manufacture comprising a computer readable medium having computer readable program code disposed thereon which, when executed by an electronic computing apparatus, performs the method of:

electronically receiving a portable coupon device that is:

associated with one said consumer account issued by one said issuer, and

acceptable as payment for a future purchase to be made on the consumer account;

and

has a memory, wherein stored on the memory is:

an electronic coupon:

being associated with a sponsor account issued to a sponsor of a discount by one said issuer; and

for being receivable by one said merchant to give the discount on a purchase, wherein the discount is to be debited from the sponsor account and credited to one said merchant account issued by another said issuer to the one said merchant to reimburse the one said merchant for the discount; and

discount information including an identifier for:

the sponsor account;

a discount amount; and

the purchase that is eligible for the discount from the merchant and including at least one of a good and a service;

electronically reading, using a card read/writer of the POS, the discount information from the memory of the portable coupon device;

electronically forming a transmission, at the POS, addressed to an acquirer requesting authorization of the electronic coupon, the transmission including the sponsor account and the discount amount;

electronically receiving an authorization response, at the POS, from the acquirer; and

operative if the authorization response includes an approval of the electronic coupon:

electronically applying the discount, at the POS, to a cost of the purchase; and

electronically accepting, at the POS, a payment for the cost of the purchase less the discount amount.

9. The article of manufacture as defined in Exemplary Implementation No. 8, further comprising computer readable program code which, when executed by the electronic computing apparatus, performs the method of:

electronically receiving, at the POS, a bar code identifying the purchase; and

electronically scanning, with a scanner of the POS, the bar code.

10. The article of manufacture as defined in Exemplary Implementation No. 9, further comprising computer readable program code operative if the authorization response includes an approval of the electronic coupon, which, when executed by the electronic computing apparatus, performs the method of electronically forming a transmission, at the POS, addressed to the acquirer requesting payment of the discount thereby starting the process of:

debiting the sponsor account for the discount amount; and

crediting the merchant account for the discount amount.

11. The article of manufacture as defined in Exemplary Implementation No. 10, wherein said accepting further comprises computer readable program code which, when executed by the electronic computing apparatus, performs the method of:

electronically reading, using the card read/writer of the POS, an identifier for the consumer account from the portable coupon device; and

electronically forming a transmission, at the POS, addressed to the acquirer requesting payment of the cost of the purchase less the discount amount thereby starting the process of:

electronically debiting the consumer account for the cost of the purchase less the discount amount; and

electronically crediting the merchant account for the cost of the purchase less the discount amount.

12. The article of manufacture as defined in Exemplary Implementation No. 11, wherein the portable coupon card is a smart card, the article of manufacture further comprising which, when executed by the electronic computing apparatus, performs the method of wirelessly interrogating the smart card.

13. The article of manufacture as defined in Exemplary Implementation No. 12, further c which, when executed by the electronic computing apparatus, performs the method of electronically deleting, using the card read/writer of the POS, the electronic coupon from the portable coupon card.

14. The article of manufacture as defined in Exemplary Implementation No. 13, wherein the sponsor account is issued to a member of the group comprising:

the merchant selling the purchase;

a manufacturer of the purchase;

a wholesaler of the purchase; and

a distributor of the purchase.

15. For a payment processing network that includes a plurality of merchants and consumers engaging in a plurality of transactions on a plurality of respective consumer accounts that respective issuers issue to the consumers, each said transaction involving an electronic coupon associated with a sponsor account issued by an issuer, wherein the merchant submits the transaction to an acquirer for processing by a transaction handler who requests the issuer to obtain payment for a discount applied by the merchant to the transaction from the sponsor account, and wherein the issuer forwards the payment to the transaction handler who forwards the payment to the acquirer to reimburse the merchant for the discount given on the transaction, a computer program product encoded in a computer readable medium and useable with a programmable computer processor to provide a discount on a purchase to a consumer, the computer program product comprising:

computer readable program code which causes said programmable process to electronically receive a portable coupon device that is:

associated with one said consumer account issued by one said issuer, and

acceptable as payment for a future purchase to be made on the consumer account;

and

has a memory, wherein stored on the memory is:

an electronic coupon:

being associated with a sponsor account issued to a sponsor of a discount by one said issuer; and

for being receivable by one said merchant to give the discount on a purchase, wherein the discount is to be debited from the sponsor account and credited to one said merchant account issued by another said issuer to the one said merchant to reimburse the one said merchant for the discount;

and

discount information including an identifier for:

the sponsor account;

a discount amount; and

the purchase that is eligible for the discount from the merchant and including at least one of a good and a service;

computer readable program code which causes said programmable process to electronically read, using a card read/writer of the POS, the discount information from the memory of the portable coupon device;

computer readable program code which causes said programmable process to electronically form a transmission, at the POS, addressed to an acquirer requesting authorization of the electronic coupon, the transmission including the sponsor account and the discount amount;

computer readable program code which causes said programmable process to electronically receive an authorization response, at the POS, from the acquirer;

and

operative if the authorization response includes an approval of the electronic coupon:

computer readable program code which causes said programmable process to electronically apply the discount, at the POS, to a cost of the purchase; and

computer readable program code which causes said programmable process to electronically accept, at the POS, a payment for the cost of the purchase less the discount amount.

16. The computer program product as defined in Exemplary Implementation No. 15, further comprising:

computer readable program code which causes said programmable process to electronically receive, at the POS, a bar code identifying the purchase; and

computer readable program code which causes said programmable process to electronically scan, with a scanner of the POS, the bar code.

17. The computer program product as defined in Exemplary Implementation No. 16, further comprising computer readable program code operative if the authorization response includes an approval of the electronic coupon, which causes said programmable process to electronically form a transmission, at the POS, addressed to the acquirer requesting payment of the discount thereby starting the process of:

debiting the sponsor account for the discount amount; and

crediting the merchant account for the discount amount.

18. The computer program product as defined in Exemplary Implementation No. 17, wherein said accepting further comprises:

computer readable program code which causes said programmable process to electronically read, using the card read/writer of the POS, an identifier for the consumer account from the portable coupon device; and

computer readable program code which causes said programmable process to electronically form a transmission, at the POS, addressed to the acquirer requesting payment of the cost of the purchase less the discount amount thereby starting the process of:

debiting the consumer account for the cost of the purchase less the discount amount; and

crediting the merchant account for the cost of the purchase less the discount amount.

19. The computer program product as defined in Exemplary Implementation No. 18, further comprising computer readable program code which causes said programmable process to electronically delete, using the card read/writer of the POS, the electronic coupon from the portable coupon card.

20. The computer program product as defined in Exemplary Implementation No. 19, wherein the sponsor account is issued to a member of the group comprising:

the merchant selling the purchase;

a manufacturer of the purchase;

a wholesaler of the purchase; and

a distributor of the purchase.

Exemplary implementations corresponding to U.S. Patent Application Serial No. 12/480,551, filed on June 8, 2009, by Karen Cervenka, titled Transaction Handler Merchant Reimbursement For Consumer Transaction Use Of Sponsor Discount Coupon Card:

1. For a payment processing network that includes a plurality of merchants and consumers engaging in a plurality of transactions on a plurality of respective consumer accounts that respective issuers issue to the consumers, each said transaction involving an electronic coupon associated with a sponsor account issued by an issuer, wherein the merchant submits the transaction to an acquirer for processing by a transaction handler who requests the issuer to obtain payment for a discount applied by the merchant to the transaction from the sponsor account, and wherein the issuer forwards the payment to the transaction handler who forwards

the payment to the acquirer to reimburse the merchant for the discount given on the transaction, an article of manufacture comprising a computer readable medium having computer readable program code disposed thereon which, when executed by an electronic computing apparatus, performs the method of:

electronically receiving, from one said acquirer, a first authorization request for the application of a discount by one said merchant to a purchase, wherein the discount is associated with an electronic coupon stored on a portable consumer device, the electronic coupon:

being associated with a sponsor account issued to a sponsor of a discount by one said issuer; and

for being receivable by the one said merchant to give the discount on a purchase wherein the discount is to be debited from the sponsor account and credited to one said merchant account issued by another said issuer to the one said merchant to reimburse the one said merchant for the discount;

wherein the first authorization request includes the sponsor account and a discount amount;

electronically sending the first authorization request to the issuer of the sponsor account corresponding to the electronic coupon;

electronically receiving, in response to the sending of the first authorization request, a first authorization;

electronically sending the first authorization response to the one said acquirer; and

operative if the first authorization response includes an approval of the application of the discount to the purchase, electronically sending a first payment request to the issuer of the sponsor account to debit the sponsor account for the discount amount.

2. The article of manufacture as defined in Exemplary Implementation No. 1, wherein the portable coupon device is associated with a consumer account issued by an issuer to the consumer, further comprising a series of computer readable program code which, when executed by the electronic computing apparatus, performs the method of:

electronically receiving, from the one said acquirer, a second transmission requesting authorization of payment from the customer account for a cost of the purchase less the discount amount;

electronically sending a second authorization response to the one said acquirer; and

operative if the second authorization response includes an approval of the electronic coupon, electronically sending a second payment request to the issuer of the consumer account

requesting payment of the cost of the purchase less the discount amount from the consumer account.

3. The article of manufacture as defined in Exemplary Implementation No. 1, wherein the sponsor account is issued to a member of the group comprising:

the merchant selling the purchase;

a manufacturer of the purchase;

a wholesaler of the purchase; and

a distributor of the purchase.

4. The article of manufacture as defined in Exemplary Implementation No. 3, further comprising a series of computer readable program code operative if the sponsor account is issued to the one said merchant, which, when executed by the electronic computing apparatus, performs the method of electronically verifying the first authorization request is received from the one said merchant.

5. The article of manufacture as defined in Exemplary Implementation No. 1, wherein the first authorization request includes an expiration date, wherein the first authorization response includes an approval of the electronic coupon where the electronic coupon is not expired.

6. The article of manufacture as defined in Exemplary Implementation No. 1, wherein the first authorization request includes a request to delete the electronic coupon from the portable coupon card.

7. Any portable coupon device for use a payment processing network that includes a plurality of merchants and consumers engaging in a plurality of transactions on a plurality of respective consumer accounts that respective issuers issue to the consumers, each said transaction involving an electronic coupon associated with a sponsor account issued by an issuer, wherein the merchant submits the transaction to an acquirer for processing by a transaction handler who requests the issuer to obtain payment for a discount applied by the merchant to the transaction from the sponsor account, and wherein the issuer forwards the payment to the transaction handler who forwards the payment to the acquirer to reimburse the merchant for the discount given on the transaction, wherein:

each said portable coupon device:

stores at least one said electronic coupon, wherein the electronic coupon is valid after a sponsor submits a payment that is credited to a sponsor account for payment of a discount, each electronic coupon:

identifies a corresponding the sponsor account; and

stores electronically readable information sufficient for one said merchant to request authorization of the discount from an issuer of the sponsor account that is to be debited from the sponsor account and credited to the one said merchant account that was issued to the one said merchant by one said acquirer so as to reimburse the one said merchant for the discount, wherein the discount is applied to a future said purchase from the one said merchant;

and

stores discount information including an identifier for:

the sponsor account;

a discount amount; and

the purchase that is eligible for the discount from the merchant and including at least one of a good and a service;

wherein the portable coupon device is acceptable for a future transaction involving the purchase, wherein the discount amount is debited from the sponsor account.

8. The portable coupon device as defined in Exemplary Implementation No. 7, wherein the promotion account is issued to a member of the group comprising:

the merchant selling the eligible good or service;

a manufacturer of the eligible good;

a wholesaler of the eligible good; and

a distributor of the eligible good.

9. The portable coupon device as defined in Exemplary Implementation No. 7, wherein the portable coupon device is associated with a consumer account issued by an issuer to the consumer.

10. The portable coupon device as defined in Exemplary Implementation No. 7, wherein the portable coupon device is a substantially planar laminate card.

11. The portable coupon device as defined in Exemplary Implementation No. 10, wherein the portable coupon device is a smart card, the information being stored in a memory.

12. The portable coupon device as defined in Exemplary Implementation No. 10, wherein the portable coupon card includes a magnetic stripe, the information being stored on the magnetic stripe.

13. The portable coupon device as defined in Exemplary Implementation No. 7, wherein the stored information further comprises an expiration date.

14. The portable coupon device as defined in Exemplary Implementation No. 7, wherein the stored information further comprises an sponsor merchant, wherein the electronic coupon is valid when the eligible good or service is purchased at the sponsor merchant.

15. For a payment processing network that includes a plurality of merchants and consumers engaging in a plurality of transactions on a plurality of respective consumer accounts that respective issuers issue to the consumers, each said transaction involving an electronic coupon associated with a sponsor account issued by an issuer, wherein the merchant submits the transaction to an acquirer for processing by a transaction handler who requests the issuer to obtain payment for a discount applied by the merchant to the transaction from the sponsor account, and wherein the issuer forwards the payment to the transaction handler who forwards the payment to the acquirer to reimburse the merchant for the discount given on the transaction, a computer program product encoded in a computer readable medium and useable with a programmable computer processor to provide a discount on an eligible good or service to a consumer, the computer program product comprising:

computer readable program code which causes said programmable process to electronically receive, from one said acquirer, a first authorization request for the application of a discount by one said merchant to a purchase, wherein the discount is associated with an electronic coupon stored on a portable consumer device, the electronic coupon:

being associated with a sponsor account issued to a sponsor of a discount by one said issuer; and

for being receivable by the one said merchant to give the discount on a purchase wherein the discount is to be debited from the sponsor account and credited to one said merchant account issued by another said issuer to the one said merchant to reimburse the one said merchant for the discount;

wherein the first authorization request includes the sponsor account and a discount amount;

computer readable program code which causes said programmable process to electronically send the first authorization request to the issuer of the sponsor account corresponding to the electronic coupon;

computer readable program code which causes said programmable process to electronically receive, in response to the sending of the first authorization request, a first authorization;

computer readable program code which causes said programmable process to electronically send the first authorization response to the one said acquirer; and

computer readable program code operative if the first authorization response includes an approval of the application of the discount to the purchase, which causes said programmable process to electronically send a first payment request to the issuer of the sponsor account to debit the sponsor account for the discount amount.

16. The computer programmable product as defined in Exemplary Implementation No. 15, wherein the portable coupon device is associated with a consumer account issued by an issuer to the consumer, further comprising:

computer readable program code which causes said programmable process to electronically receive, from the one said acquirer, a second transmission requesting authorization of payment from the customer account for a cost of the purchase less the discount amount;

computer readable program code which causes said programmable process to electronically send a second authorization response to the one said acquirer; and

computer readable program code operative if the second authorization response includes an approval of the electronic coupon, which causes said programmable process to electronically send a second payment request to the issuer of the consumer account requesting payment of the cost of the purchase less the discount amount from the consumer account.

17. The computer programmable product as defined in Exemplary Implementation No. 15, wherein the sponsor account is issued to a member of the group comprising:

the merchant selling the purchase;

a manufacturer of the purchase;

a wholesaler of the purchase; and

a distributor of the purchase.

18. The computer programmable product as defined in Exemplary Implementation No. 17, further comprising computer readable program code operative if the sponsor account is issued to the one said merchant, which causes said programmable process to electronically verify the first authorization request is received from the one said merchant.

19. The computer programmable product as defined in Exemplary Implementation No. 15, wherein the first authorization request includes an expiration date, wherein the first authorization response includes an approval of the electronic coupon where the electronic coupon is not expired.

20. The computer programmable product as defined in Exemplary Implementation No. 15, wherein the first authorization request includes a request to delete the electronic coupon from the portable coupon card.

General Concepts of Foregoing Disclosure

The steps, methods, processes, and devices described in connection with the implementations disclosed herein, are made with reference to the Figures, in which like numerals represent the same or similar elements. While described in terms of the best mode, it will be appreciated by those skilled in the art that the description is intended to cover alternatives, modifications, and equivalents as may be included within the spirit and scope of the invention as defined by the appended claims and their equivalents as supported by the following disclosure and drawings. Reference throughout this specification to "one implementation," "an implementation," or similar language means that a particular feature, structure, or characteristic described in connection with the implementation is included in at least one implementation of the present invention. Thus, appearances of the phrases "in one implementation," "in an implementation," and similar language throughout this specification may, but do not necessarily, all refer to the same implementation.

The described features, structures, or characteristics of the invention may be combined in any suitable manner in one or more implementations. In the following description, numerous specific details are recited to provide a thorough understanding of implementations of the invention. One skilled in the relevant art will recognize, however, that the invention may be practiced without one or more of the specific details, or with other methods, components, materials, and so forth. In other instances, well-known structures, materials, or operations are not shown or described in detail to avoid obscuring aspects of the invention.

The schematic flow charts included are generally set forth as logical flow chart diagrams. As such, the depicted order and labeled steps are indicative of one implementation of the presented method. Other steps and methods may be conceived that are equivalent in function, logic, or effect to one or more steps, or portions thereof, of the illustrated method. Additionally, the format and symbols employed are provided to explain the logical steps of the method and are understood not to limit the scope of the method. Although various arrow types and line types may be employed in the flow chart diagrams, they are understood not to limit the scope of the corresponding method. Indeed, some arrows or other connectors may be used to indicate only the logical flow of the method. For instance, an arrow may indicate a waiting or monitoring period of unspecified duration between enumerated steps of the depicted method. Additionally, the order in which a particular method occurs may or may not strictly adhere to the order of the corresponding steps shown.

The present invention may be embodied in other specific forms without departing from its spirit or essential characteristics. The described implementations are to be considered in all respects only as illustrative and not restrictive. The scope of the invention is, therefore, indicated

by the appended claims rather than by the foregoing description. All changes which come within the meaning and range of equivalency of the claims are to be embraced within their scope.

CLAIMS

What is claimed is:

1. For a payment processing network that includes a plurality of merchants and consumers engaging in a plurality of transactions on a plurality of respective consumer accounts that respective issuers issue to the consumers, each said transaction involving an electronic coupon associated with a sponsor account issued by an issuer, wherein the merchant submits the transaction to an acquirer for processing by a transaction handler who requests the issuer to obtain payment for a discount applied by the merchant to the transaction from the sponsor account, and wherein the issuer forwards the payment to the transaction handler who forwards the payment to the acquirer to reimburse the merchant for the discount given on the transaction, a method comprising:

browsing, using a cellular telephony capability of a web enabled client, via a browser executed by the web enabled client to an Internet website in communication with a web service having a database with a plurality of electronic coupons each:

being associated with a sponsor account issued to a sponsor of a discount by one said an issuer; and

for being receivable by one said merchant to give the discount on a purchase, wherein the discount is to be debited from the sponsor account and credited to one said merchant account issued by another said issuer to the one said merchant to reimburse the one said merchant for the discount;

sending, using the cellular telephony capability of the web enabled client, from the browser:

a selection of at least one said electronic coupon;

and

a specification including:

a rendering capability of the web enabled client to render a soft copy of the at least one said electronic coupon on a display with which the web enabled client is in communication;

a type of a portable coupon device, associated with one said consumer account issued by another said issuer, and acceptable as payment for a future said purchase to be made on the consumer account;

and

an identifier for the one said consumer account to be debited for the payment for the future said purchase less the discount;

receiving, using the cellular telephony capability of the web enabled client, at the browser and in response to the sending:

a rendering image corresponding to the rendering capabilities of the web enabled client to render the soft copy of the at least one said electronic coupon on the display with which the web enabled client is in communication;

a memory location to store discount information in a memory of the type of the portable coupon device; and

discount information including an identifier for:

the sponsor account;

the discount amount; and

the purchase that is eligible for the discount from the merchant and including at least one of a good and a service;

and

writing, using a near field communication capability of the web enabled client, to the memory location in the memory of the portable coupon device the discount information.

2. The method as defined in Claim 1, wherein said receiving further comprises downloading, using the cellular telephony capability of the web enabled client, a first instruction executable by the web enabled client to write, using the near field communication capability of the web enabled client, the discount information to the memory of the portable coupon device.

3. The method as defined in Claim 2, wherein said receiving further comprises downloading, using the cellular telephony capability of the web enabled client, a second instruction executable by the web enabled client to store, in a memory of the web enabled client, the rendering image.

4. The method as defined in Claim 3, further comprising storing, in the memory of the web enabled client, the rendering image.

5. The method as defined in Claim 4, wherein the rendering image includes a bar code identifying said purchase, wherein the bar code is capable of being scanned by a scanner, the method further comprising rendering, using the rendering capabilities of the web enabled client, the bar code on the display with which the web enabled client is in communication.

6. The method as defined in Claim 4, wherein said receiving further comprises downloading, using the cellular telephony capability of the web enabled client, a third instruction executable by the web enabled client to instruct, using the near field communication capability of

the web enabled client, the portable coupon device to erase the discount information from the memory of the portable coupon device.

7. The method as defined in Claim 1, wherein the portable coupon device is a smart card, wherein said writing further comprises communicating with a processor of the smart card to instruct the processor to store the discount information in the memory location.

8. The method as defined in Claim 1, wherein the sponsor account is issued to a member of the group comprising: the merchant selling the purchase; a manufacturer of the purchase; a wholesaler of the purchase; and a distributor of the purchase.

9. A web enabled client comprising:

a browser for browsing to an Internet website in communication with a web service having a database with a plurality of electronic coupons each:

being associated with a sponsor account issued to a sponsor of a discount by one said an issuer; and

for being receivable by a merchant to give the discount on a purchase, wherein the discount is to be debited from the sponsor account and credited to a merchant account issued by another said issuer to the merchant to reimburse the merchant for the discount;

a means for sending from the browser:

a selection of at least one said electronic coupon;

and

a specification including:

a rendering capability of the web enabled client to render a soft copy of the at least one said electronic coupon on a display with which the web enabled client is in communication;

a type of a portable coupon device, associated with one said consumer account issued by another said issuer, and acceptable as payment for a future said purchase to be made on the consumer account;

and

an identifier for the one said consumer account to be debited for the payment for the future said purchase less the discount;

a means for receiving at the browser:

a rendering image corresponding to the rendering capabilities of the web enabled client to render the soft copy of the at least one said electronic coupon on the display with which the web enabled client is in communication;

a memory location to store discount information in a memory of the type of the portable coupon device; and

discount information including an identifier for:

the sponsor account;

the discount amount; and

the purchase that is eligible for the discount from the merchant and including at least one of a good and a service;

and

a means for writing to the memory location in the memory of the portable coupon device the discount information.

10. The web enabled client as defined in Claim 9, wherein the rendering image includes a bar code identifying said purchase, the web enabled client further comprising a means for rendering the bar code on the display with which the web enabled client is in communication such that the barcode is capable of being scanned by a scanner.

11. The web enabled client as defined in Claim 10, further comprising a memory of the web enabled client for storing the bar code.

12. The web enabled client as defined in Claim 11, further comprising a moblet stored in the memory of the web enabled client, wherein the moblet is capable of rendering the bar code on the display.

13. For a payment processing network that includes a plurality of merchants and consumers engaging in a plurality of transactions on a plurality of respective consumer accounts that respective issuers issue to the consumers, each said transaction involving an electronic coupon associated with a sponsor account issued by an issuer, wherein the merchant submits the transaction to an acquirer for processing by a transaction handler who requests the issuer to obtain payment for a discount applied by the merchant to the transaction from the sponsor account, and wherein the issuer forwards the payment to the transaction handler who forwards the payment to the acquirer to reimburse the merchant for the discount given on the transaction, a method comprising:

providing a portable coupon device for reading by a point of service terminal (POS), the portable coupon device:

being associated with one said consumer account issued by one said issuer, and acceptable as payment for a future said purchase to be made on the consumer account, the consumer account;

and

having a memory of the portable coupon device, wherein stored on the memory of the portable coupon device is:

an electronic coupon:

being associated with a sponsor account issued to a sponsor of a discount by one said an issuer; and

for being receivable by one said merchant to give the discount on a purchase, wherein the discount is to be debited from the sponsor account and credited to one said merchant account issued by another said issuer to the one said merchant to reimburse the one said merchant for the discount; and

discount information including an identifier for:

the sponsor account;

a discount amount; and

the purchase that is eligible for the discount from the merchant and including at least one of a good and a service;

wherein the memory of the portable coupon device is to be read, thereby providing the POS with at least part of the discount information sufficient to start the process of:

debiting the consumer account for the price of the purchase less the discount amount; and

debiting the sponsor account for the discount amount; and

crediting the merchant account for the discount amount.

14. The method as defined in Claim 13, wherein the portable coupon device is a smart card, wherein to be read the smart card is interrogated by a contactless smart card reader.

15. The method as defined in Claim 13, wherein the sponsor account is issued to a member of the group comprising: the merchant selling the purchase; a manufacturer of the purchase; a wholesaler of the purchase; and a distributor of the purchase.

16. The method as defined in Claim 13, further comprising providing a web enabled client having the means for rendering a rendering image associated with the electronic coupon and stored in a memory of the web enabled client on a display with which the web enabled client is in communication.

17. The method as defined in Claim 16, wherein the rendering image includes a bar code associated with the electronic coupon, wherein the bar code identifies said purchase,

wherein the bar code can be scanned by a scanner of the POS, the method further comprising rendering the bar code on the display with which the web enabled client is in communication.

18. The method as defined in Claim 17, wherein said rendering further comprises activating a moblet stored in the memory of the web enabled client.

19. The method as defined in Claim 18, further comprising erasing the rendering image from a memory of the web enabled client.

20. The method as defined in Claim 19, further comprising instructing, using a near field communication capability of the web enabled client, the portable coupon device to erase the electronic coupon from the memory of the portable coupon device.

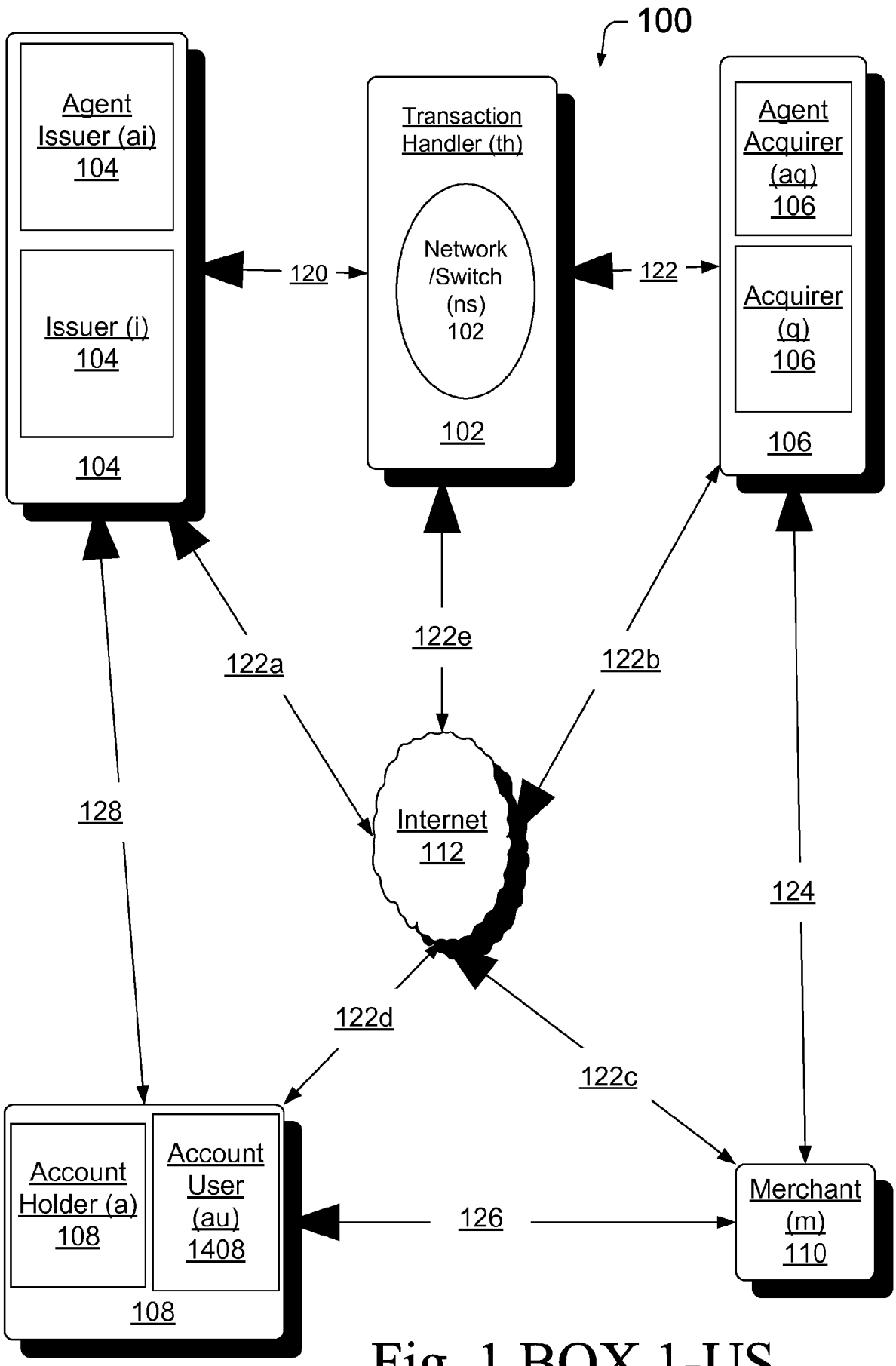
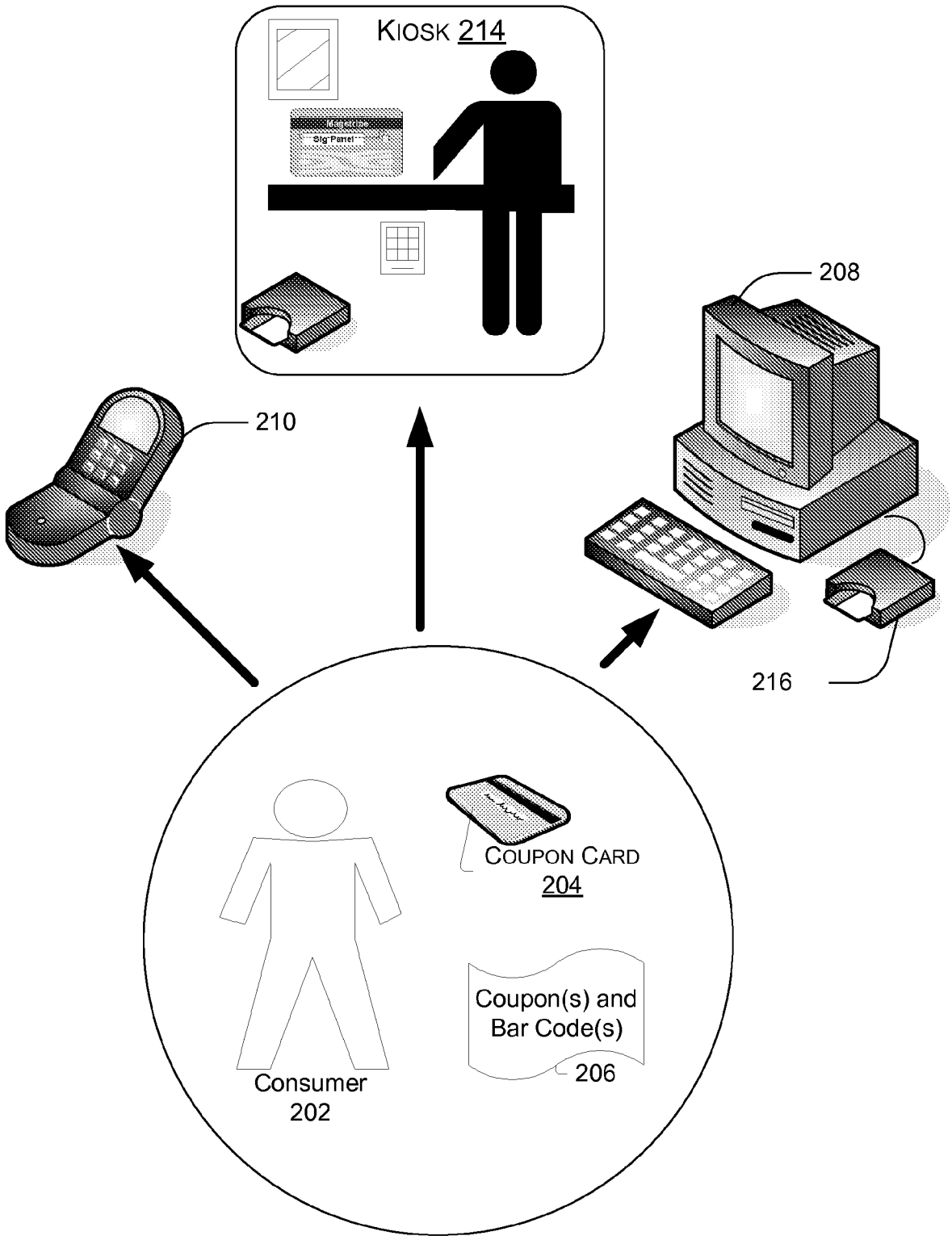

100
Agent Issuer (ai) 104
Issuer (i) 104
104
Transaction Handler (th)
Network /Switch (ns) 102
102
Agent Acquirer (aq) 106
Acquirer (q) 106
106
120
122
122a
122e
122b
128
Internet 112
124
122d
122c
Account Holder (a) 108
Account User (au) 1408
108
126
Merchant (m) 110

Fig. 1 BOX 1-US

FIG. 2 BOX 2-US


KIOSK 214
208
210
216
COUPON CARD
204
Coupon(s) and
Bar Code(s)
206
Consumer
202

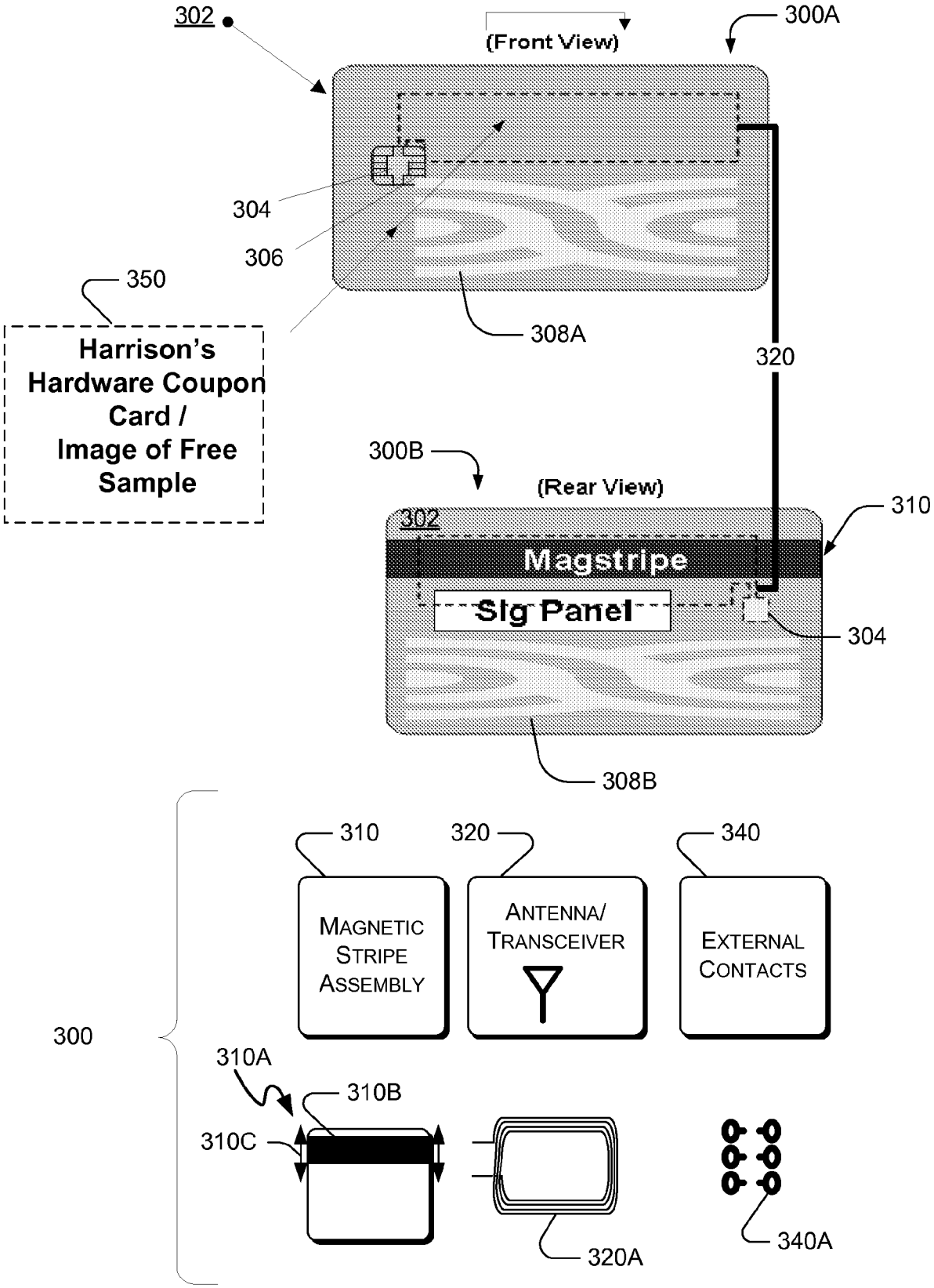

302
(Front View)
300A
304
306
350
308A
320
Harrison's Hardware Coupon Card / Image of Free Sample
300B
(Rear View)
310
302
Magstripe
Sig Panel
304
308B
310
320
340
MAGNETIC STRIPE ASSEMBLY
ANTENNA/ TRANSCEIVER
EXTERNAL CONTACTS
300
310A
310B
310C
320A
340A

FIG. 3 BOX 3-US

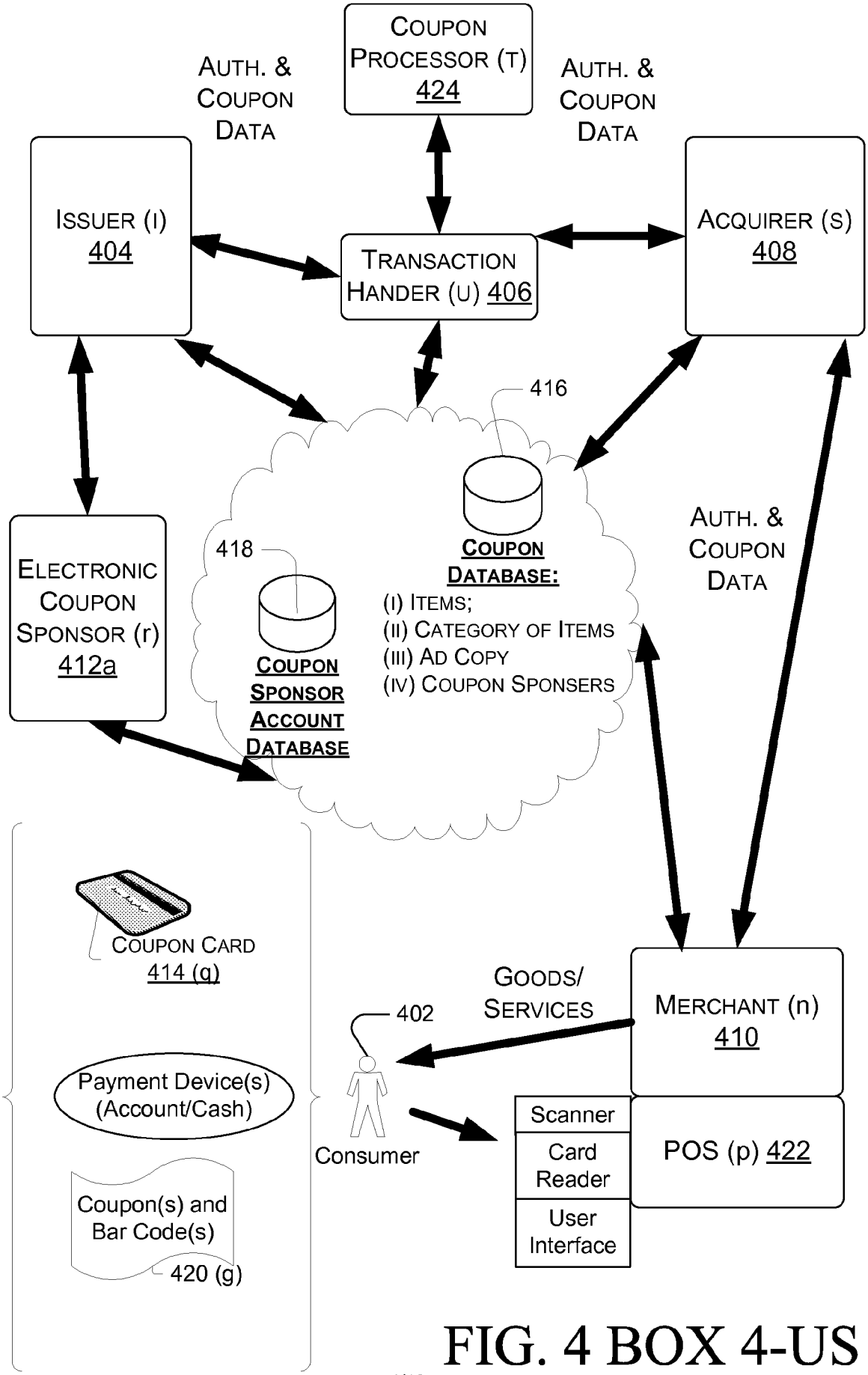

COUPON PROCESSOR (T) 424
AUTH. & COUPON DATA
AUTH. & COUPON DATA
ISSUER (I) 404
TRANSACTION HANDER (U) 406
ACQUIRER (S) 408
416
418
COUPON DATABASE:
(I) ITEMS;
(II) CATEGORY OF ITEMS
(III) AD COPY
(IV) COUPON SPONSERS
COUPON SPONSOR ACCOUNT DATABASE
ELECTRONIC COUPON SPONSOR (r) 412a
AUTH. & COUPON DATA
COUPON CARD 414 (g)
GOODS/ SERVICES
402
MERCHANT (n) 410
Payment Device(s) (Account/Cash)
Consumer
Scanner
Card Reader
User Interface
POS (p) 422
Coupon(s) and Bar Code(s)
420 (g)

FIG. 4 BOX 4-US

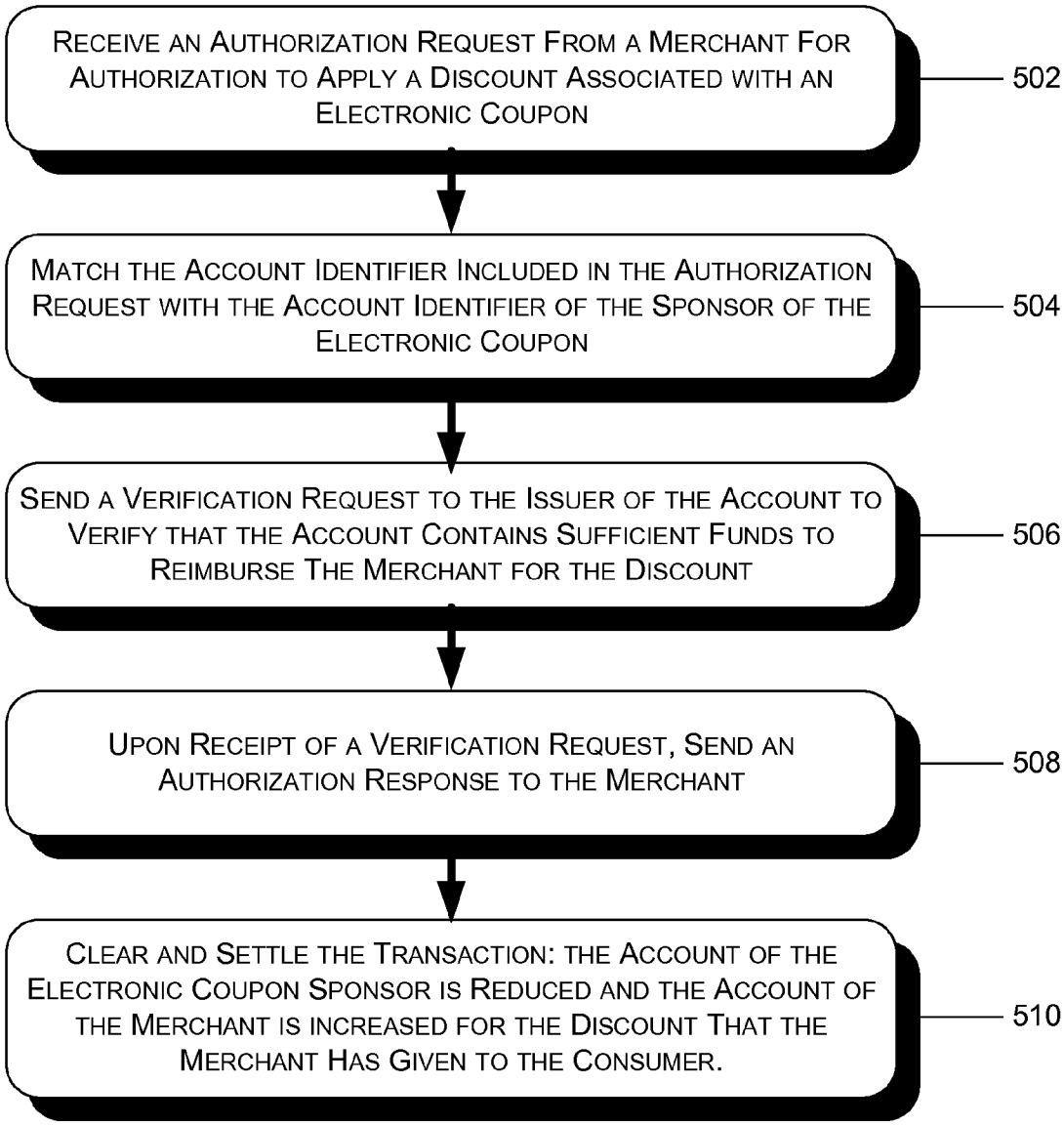

RECEIVE AN AUTHORIZATION REQUEST FROM A MERCHANT FOR AUTHORIZATION TO APPLY A DISCOUNT ASSOCIATED WITH AN ELECTRONIC COUPON
502
MATCH THE ACCOUNT IDENTIFIER INCLUDED IN THE AUTHORIZATION REQUEST WITH THE ACCOUNT IDENTIFIER OF THE SPONSOR OF THE ELECTRONIC COUPON
504
SEND A VERIFICATION REQUEST TO THE ISSUER OF THE ACCOUNT TO VERIFY THAT THE ACCOUNT CONTAINS SUFFICIENT FUNDS TO REIMBURSE THE MERCHANT FOR THE DISCOUNT
506
UPON RECEIPT OF A VERIFICATION REQUEST, SEND AN AUTHORIZATION RESPONSE TO THE MERCHANT
508
CLEAR AND SETTLE THE TRANSACTION: THE ACCOUNT OF THE ELECTRONIC COUPON SPONSOR IS REDUCED AND THE ACCOUNT OF THE MERCHANT IS INCREASED FOR THE DISCOUNT THAT THE MERCHANT HAS GIVEN TO THE CONSUMER.
510

FIG. 5 BOX 5-US

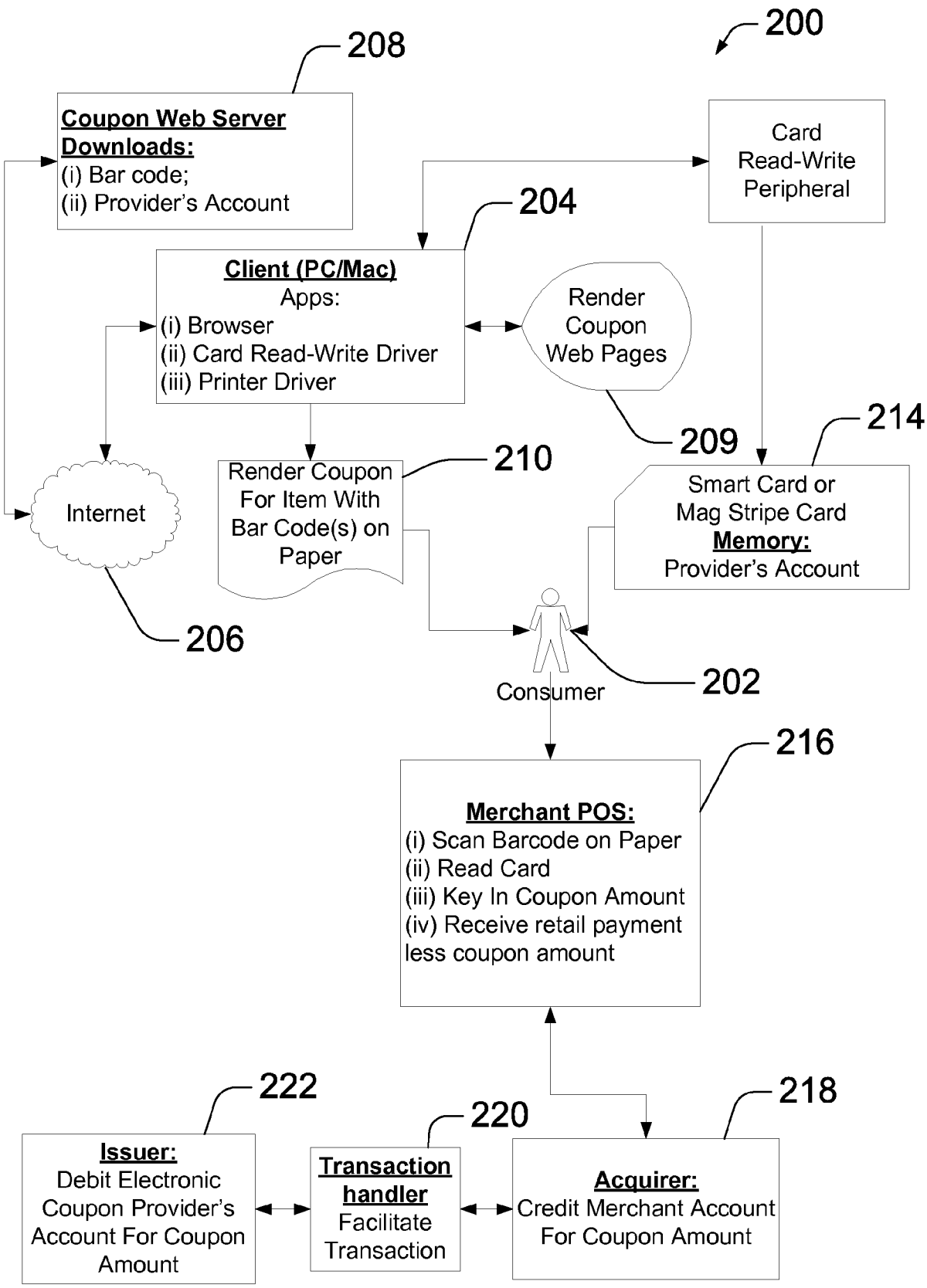


FIG. 6 BOX 2-US1

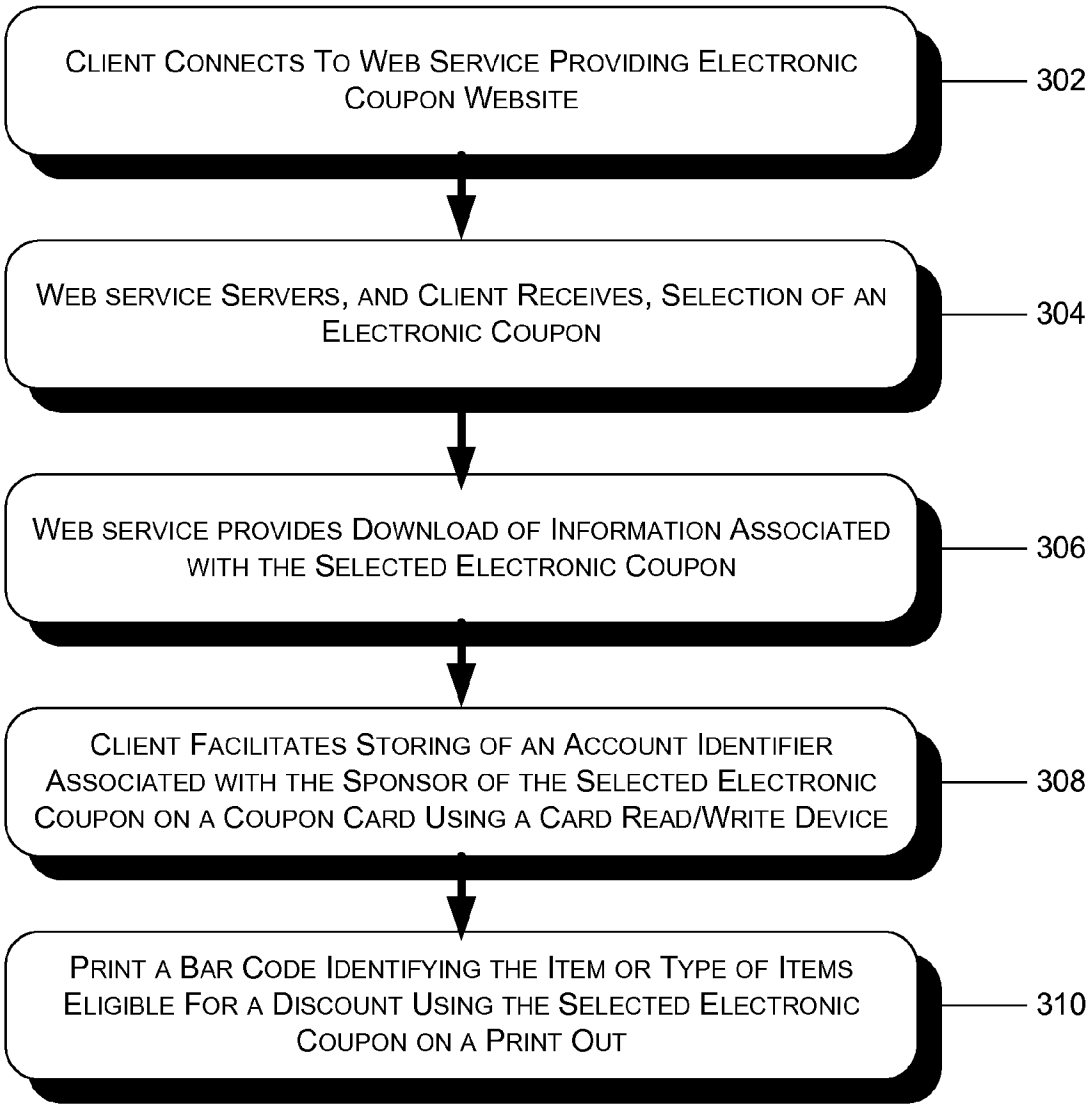


FIG. 7 BOX 3US1

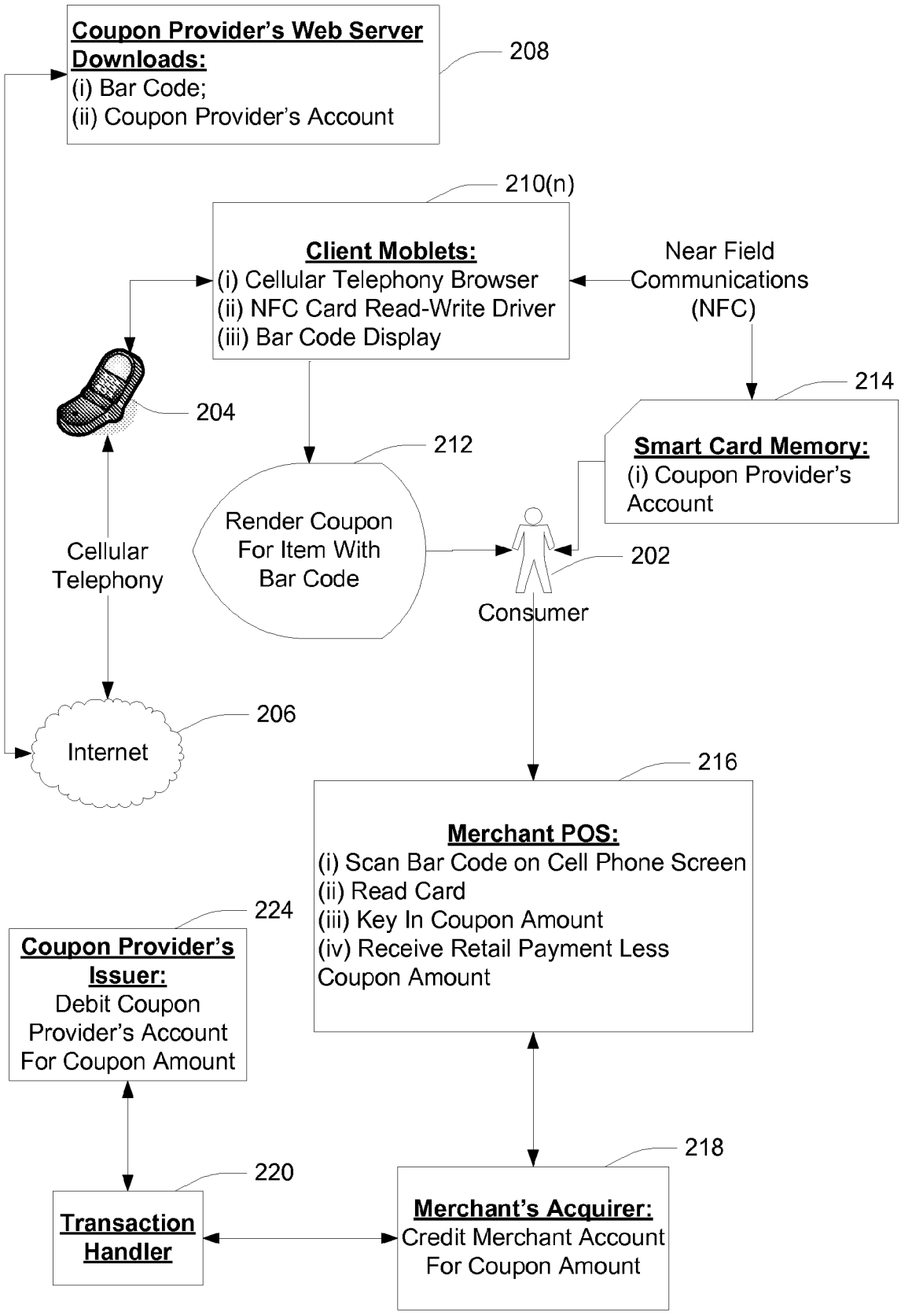


FIG. 8 BOX 2-US2

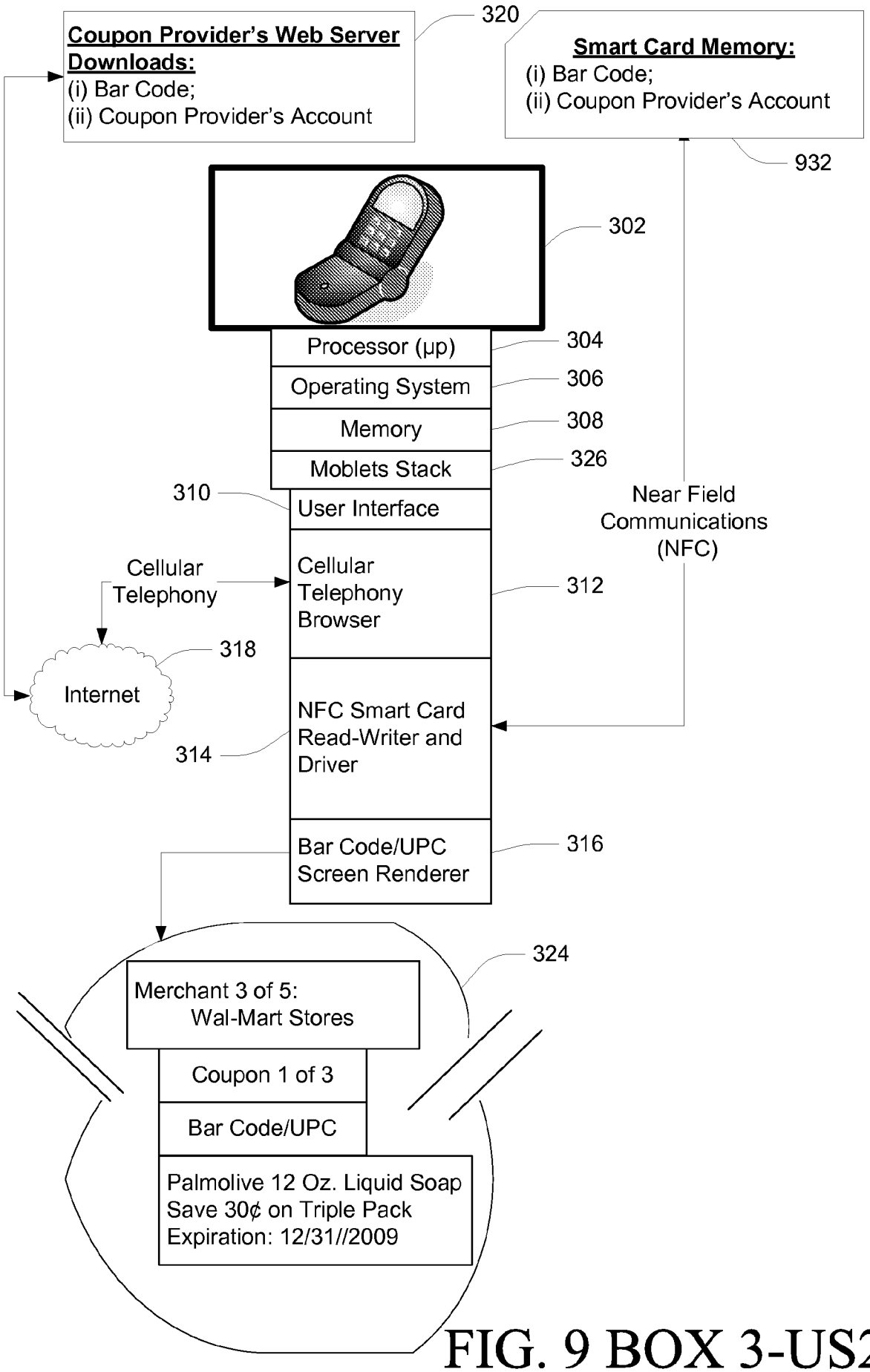


FIG. 9 BOX 3-US2

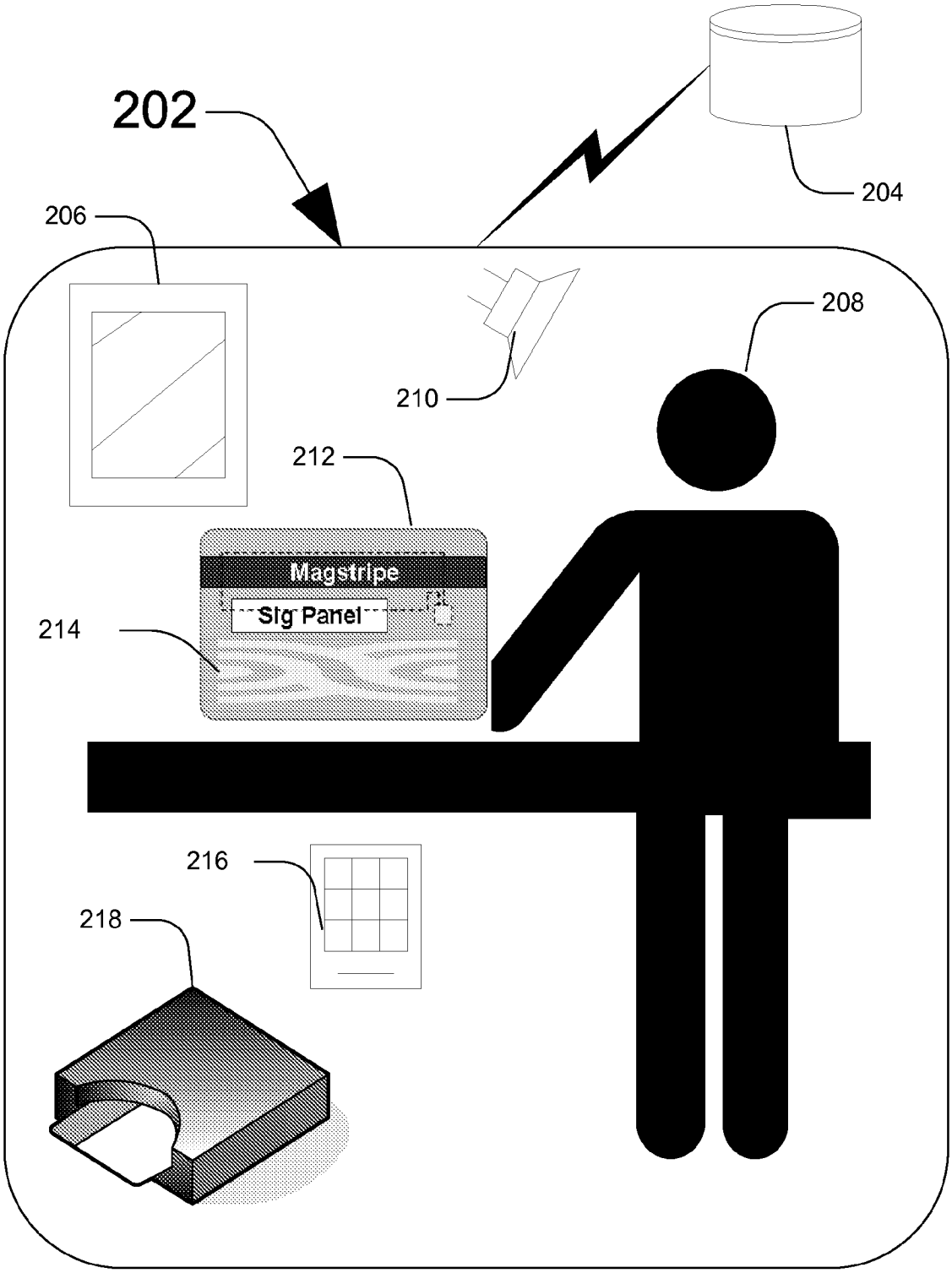


FIG. 10 BOX 2-US3

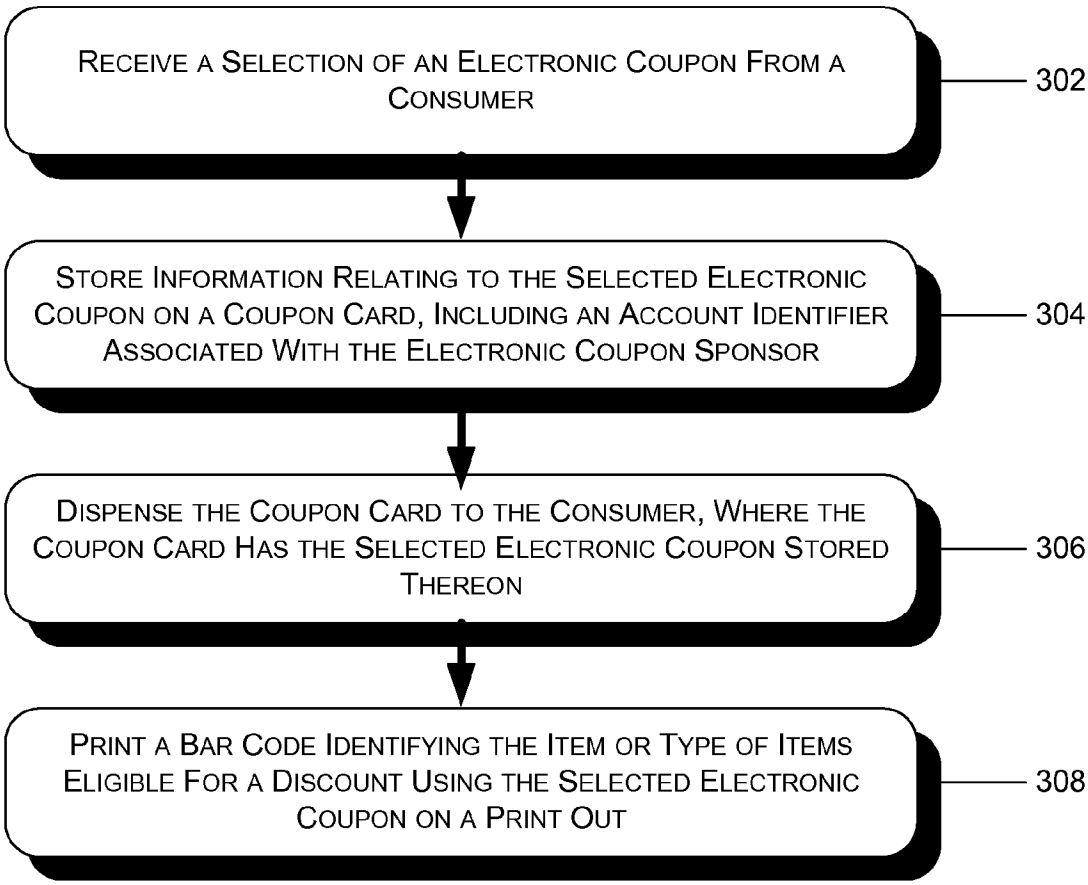


FIG. 11 BOX 3-US3

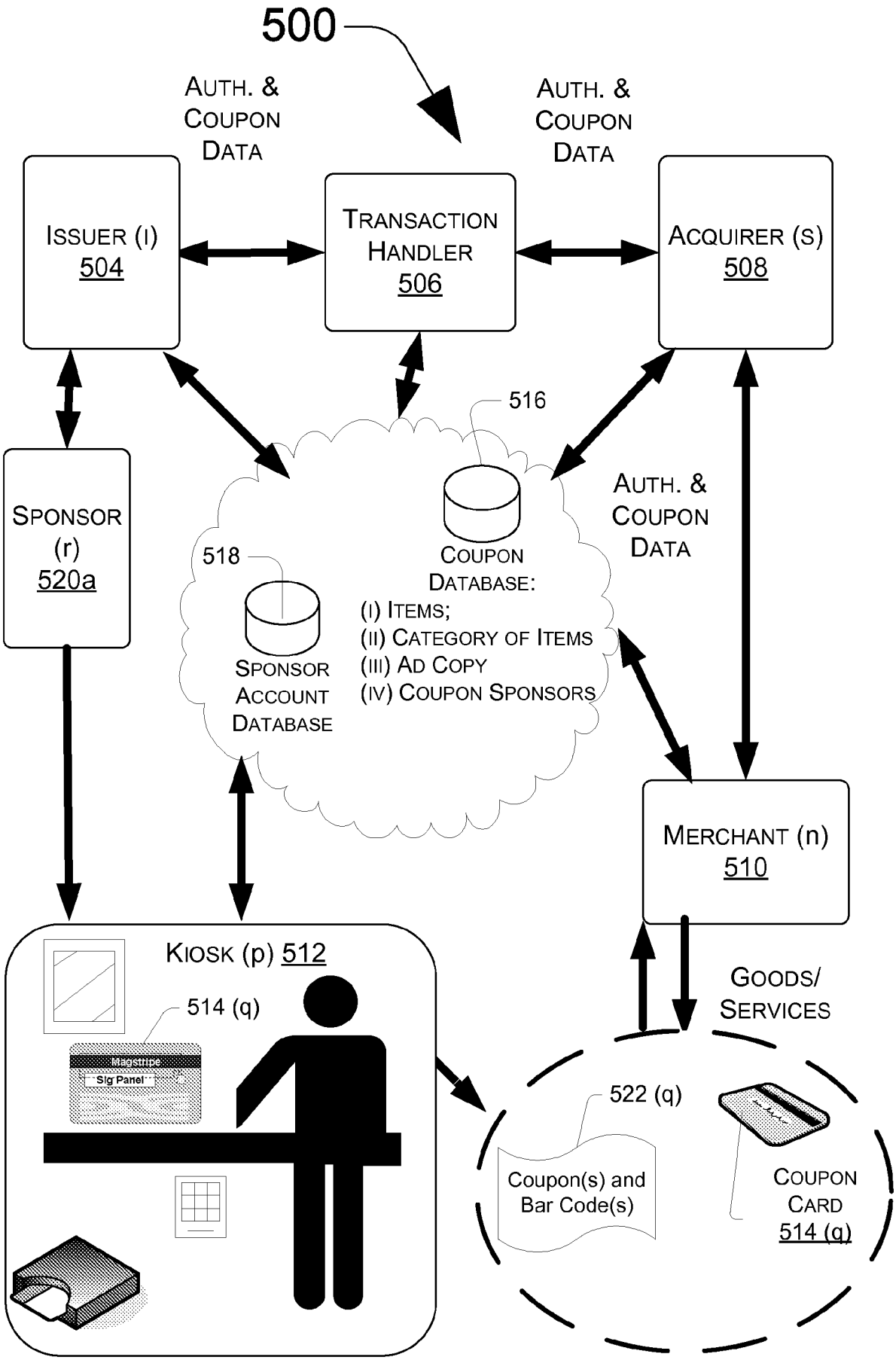


FIG. 12 BOX 5-US3

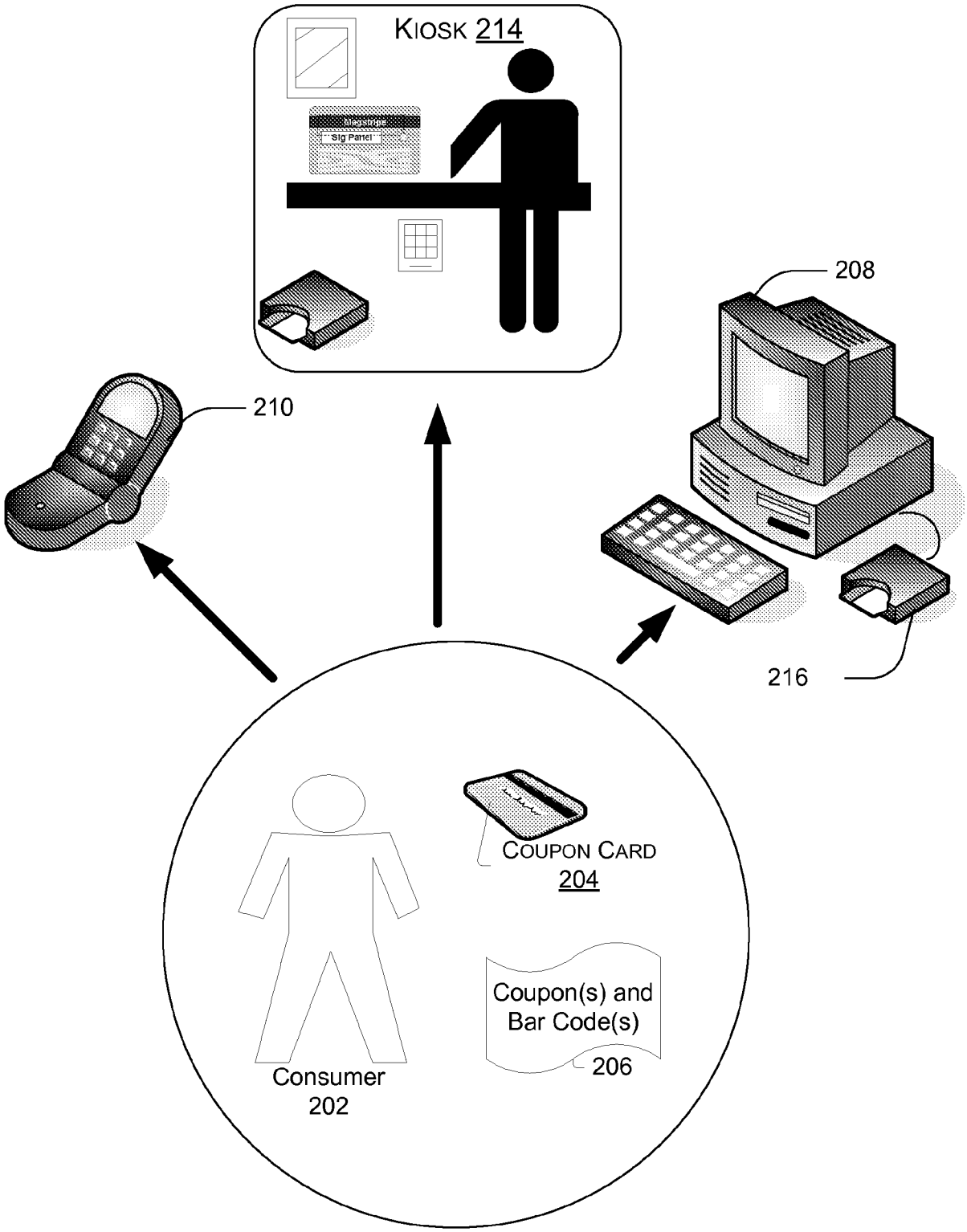


FIG. 13 BOX 2-US4

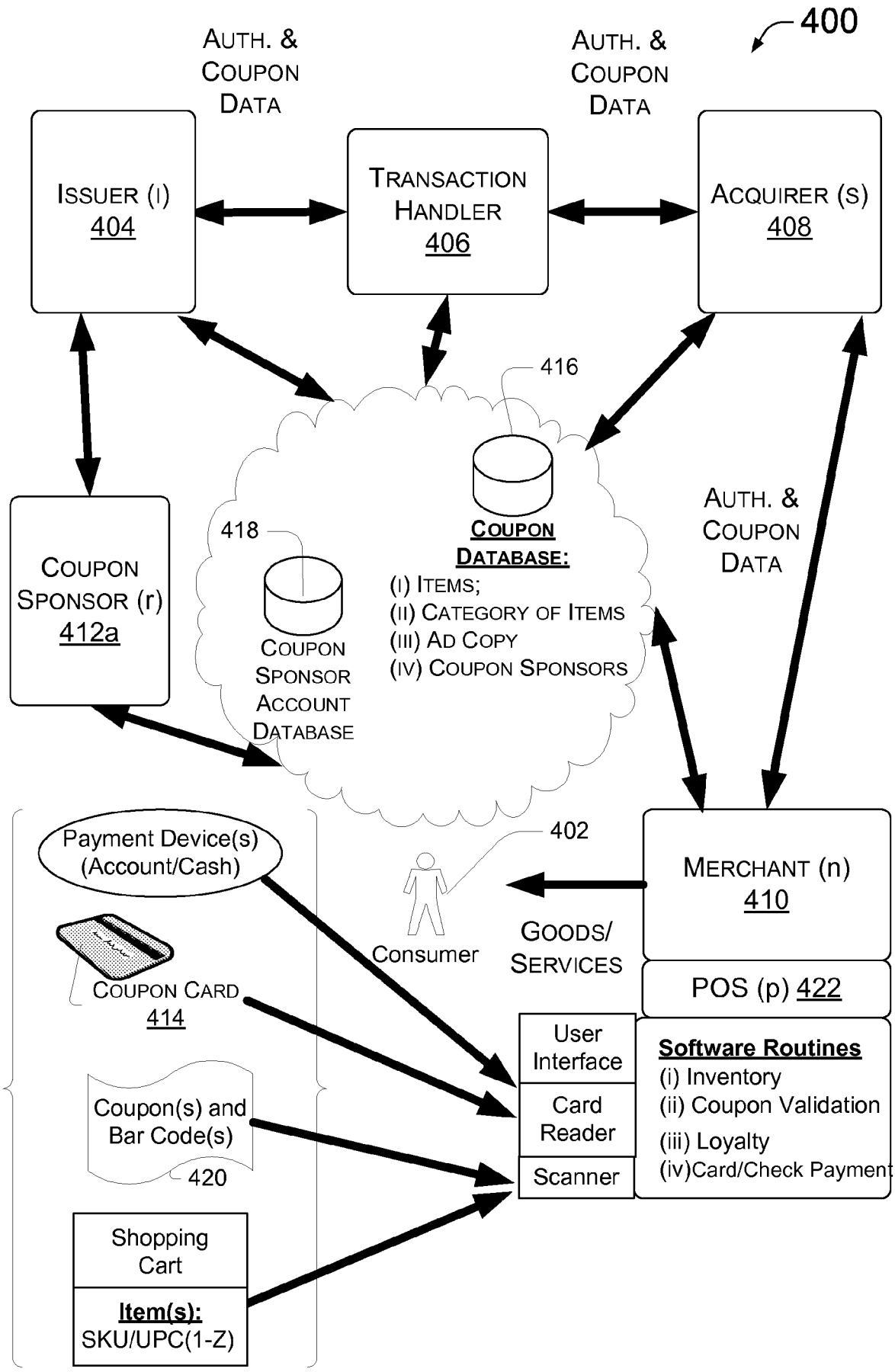


FIG. 14 BOX 4-US4

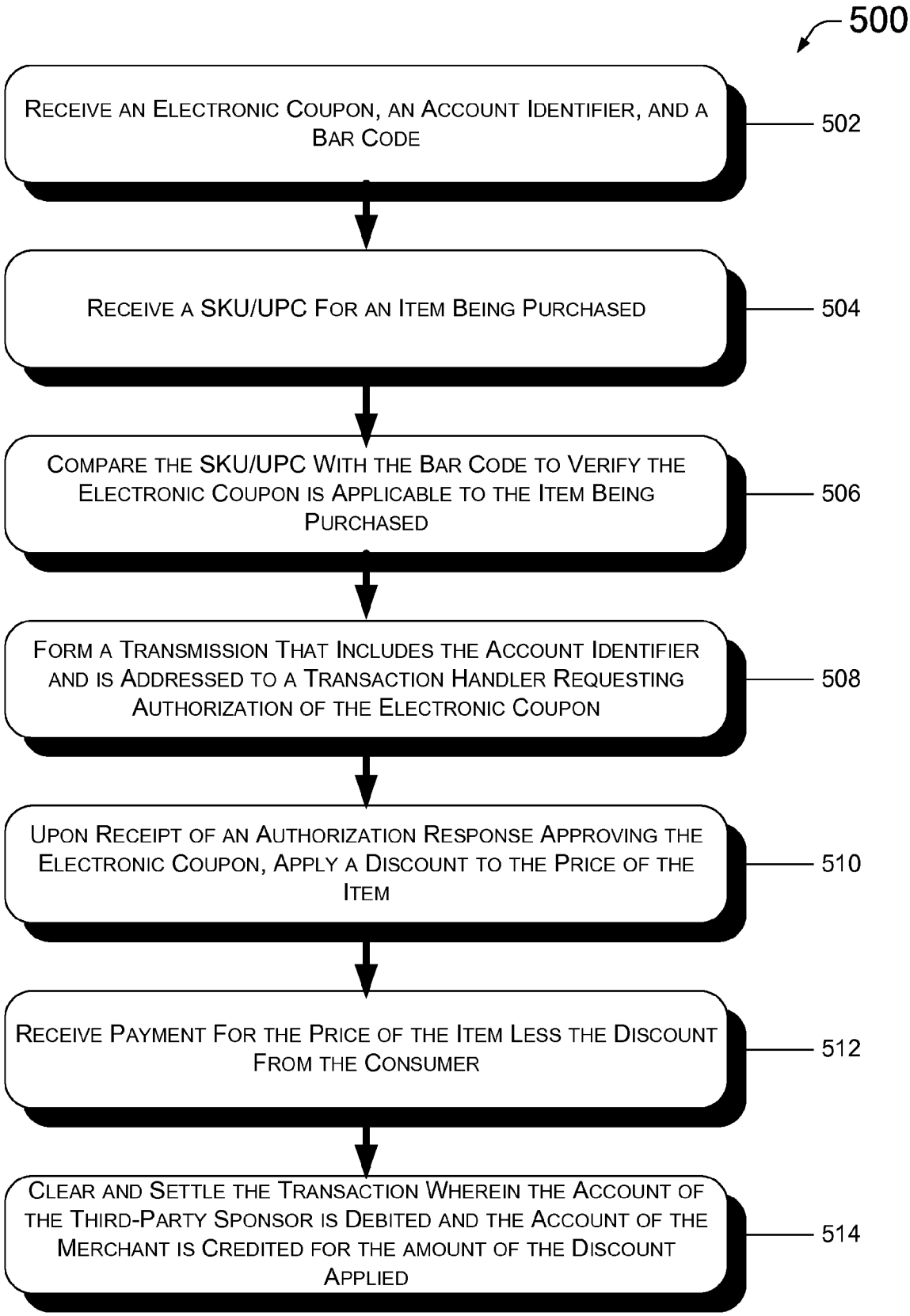


FIG. 15 BOX 5-US4

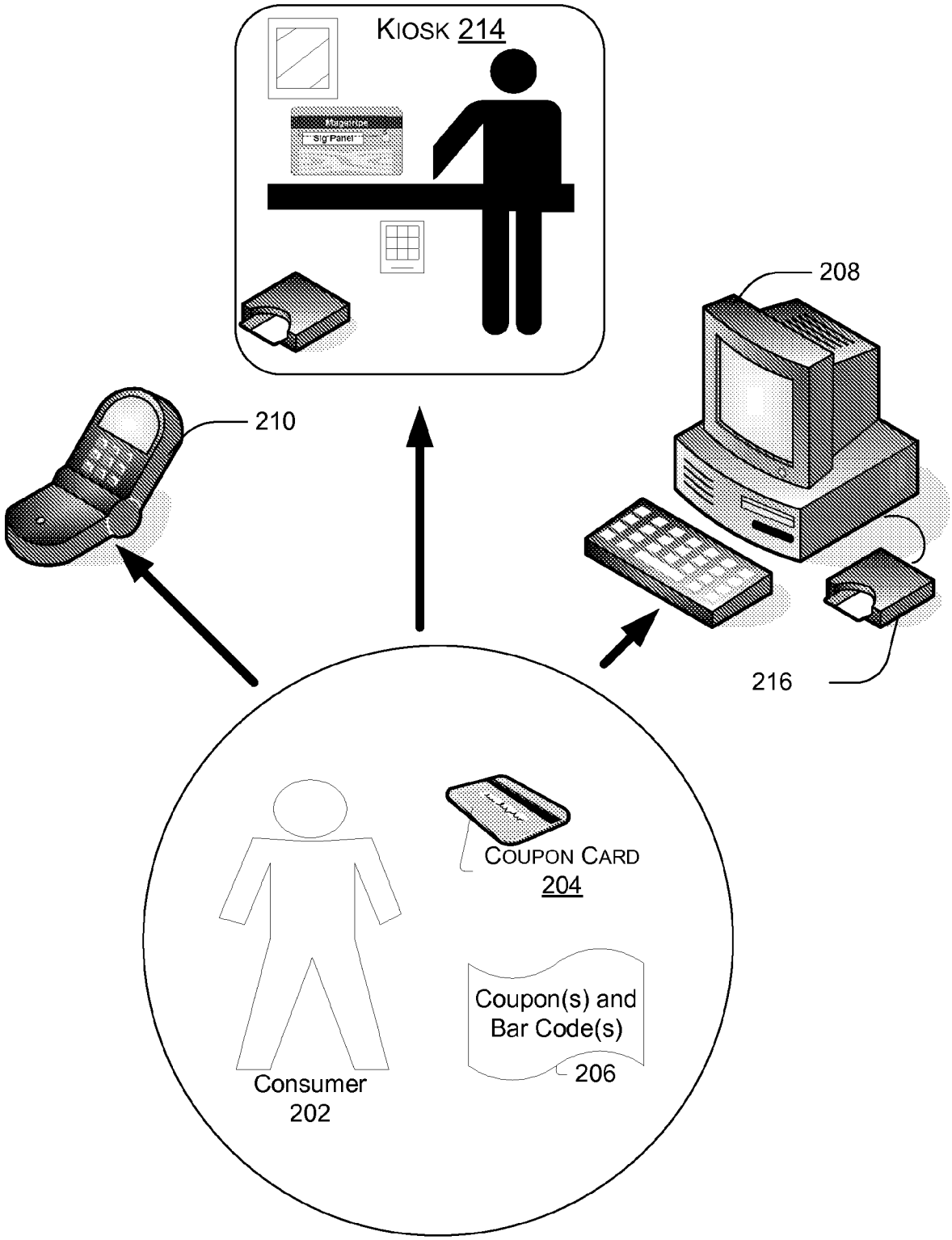


FIG. 16 BOX 2-US5

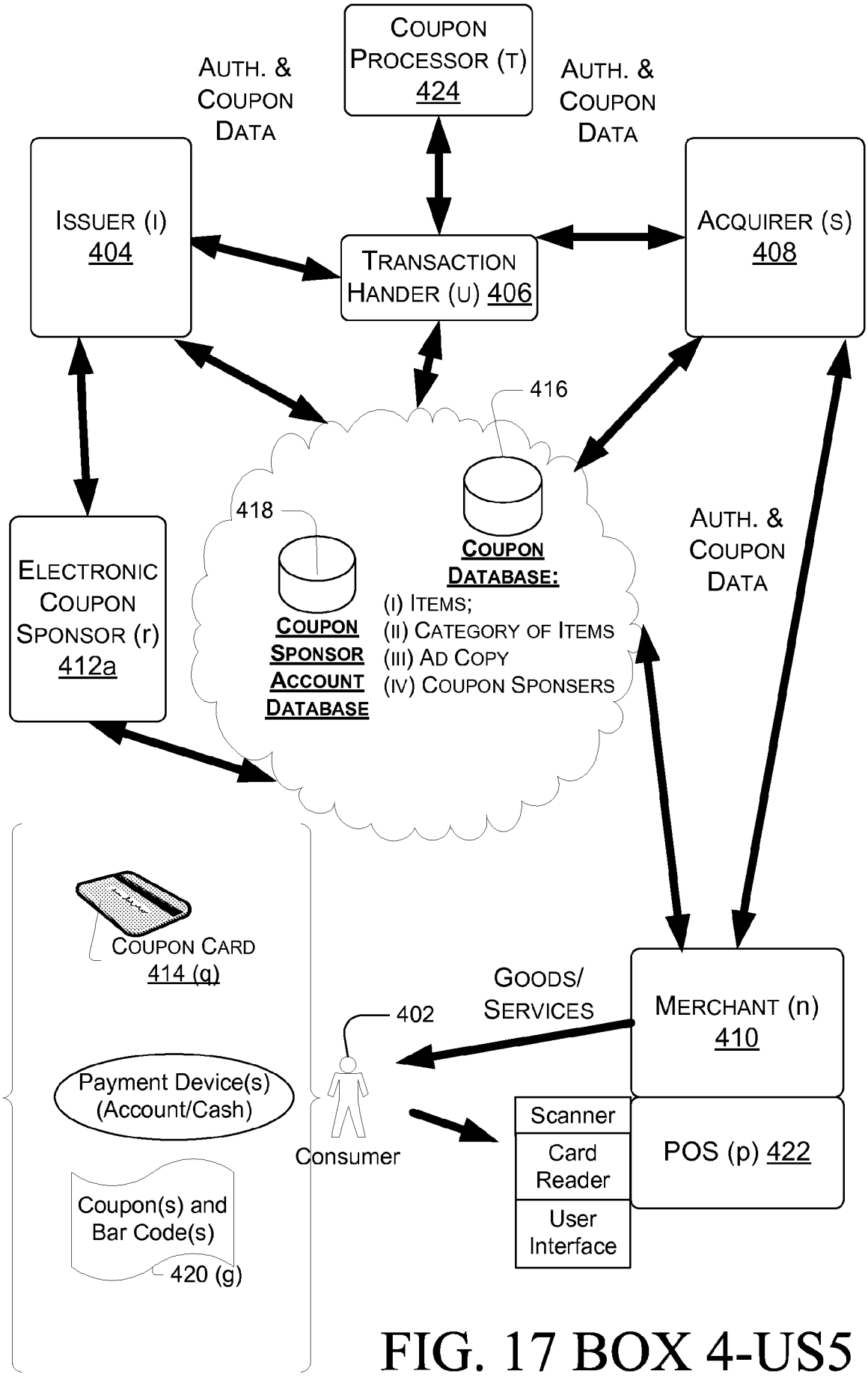


FIG. 17 BOX 4-US5

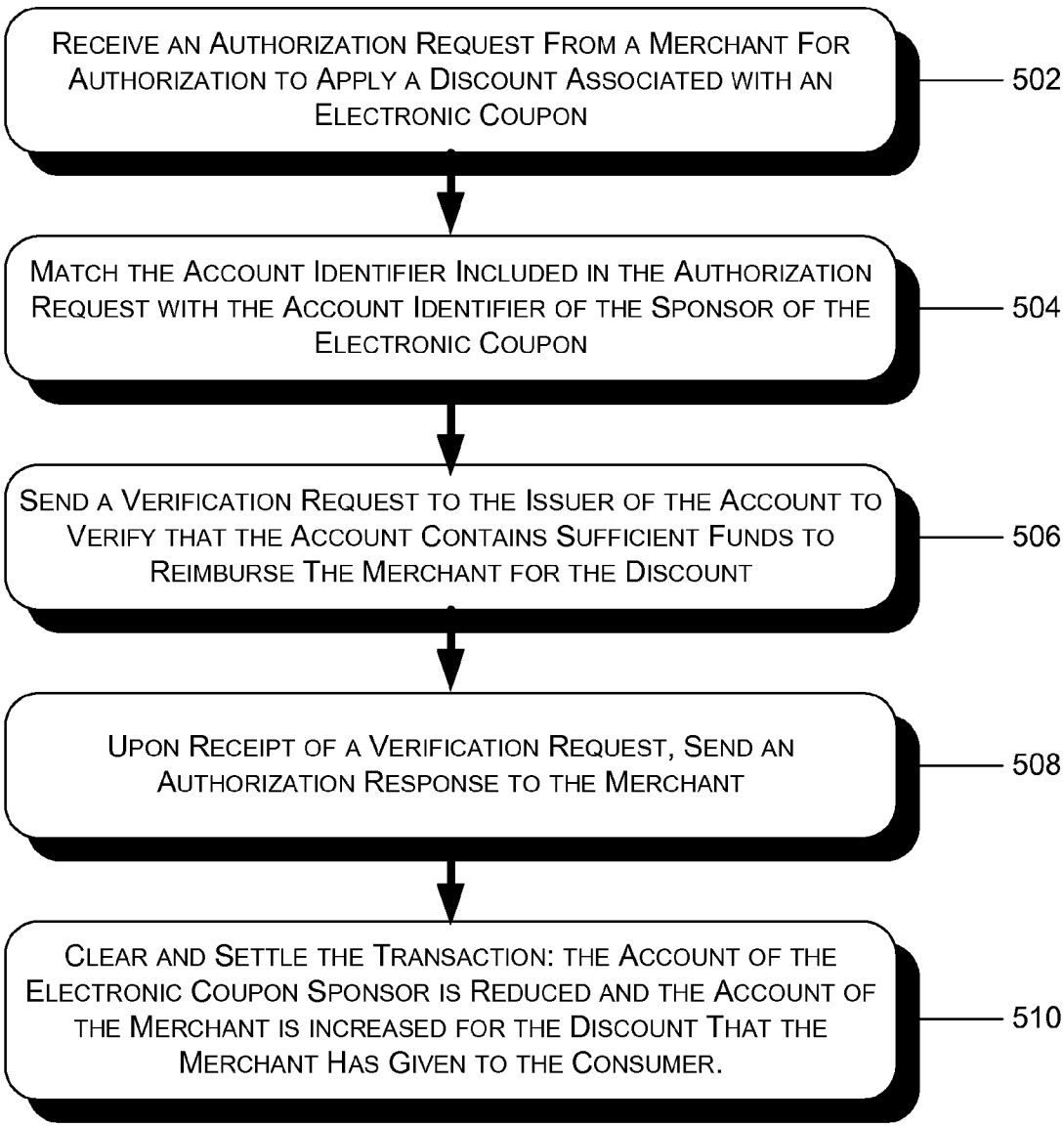


FIG. 18 BOX 5-US5