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(54) **Title:** SYSTEM AND METHOD FOR PROCESSING TRANSACTIONS WITHOUT PROVIDING ACCOUNT INFORMATION TO A PAYEE

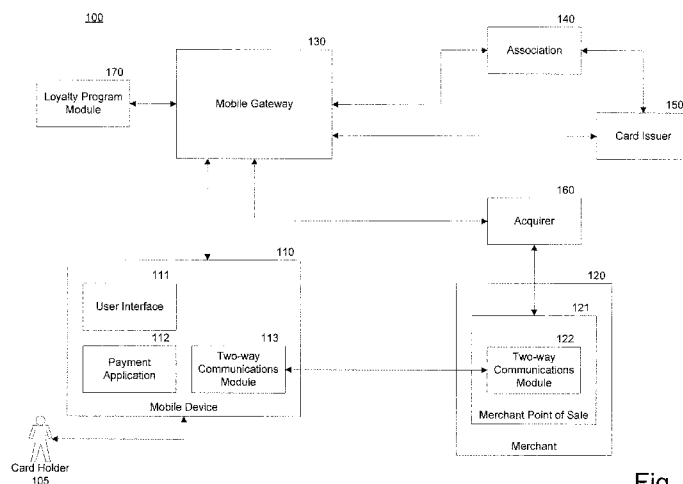


Fig. 1

(57) **Abstract:** Processing financial transactions, without providing information associated with a financial account of a purchaser to the payee of the transaction. A financial institution (card issuer) holding the account can provide a financial account, such as a credit or debit card account to the purchaser (card holder). The card holder can set up a payment option corresponding to this account at a mobile gateway computing system. Instead of presenting the card to a merchant, the card holder can access a payment application executing on a mobile device to select the payment option and extract transaction information from a merchant point of sale. This transaction information can be transmitted to the mobile gateway computing system along with payment option information. The mobile gateway computing system can add account information for the payment option and send the information to the card issuer for approval.

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5 **SYSTEM AND METHOD FOR PROCESSING**
 TRANSACTIONS WITHOUT PROVIDING
 ACCOUNT INFORMATION TO A PAYEE

STATEMENT OF RELATED PATENT APPLICATIONS

10 This non-provisional patent application claims priority under 35 U.S.C. § 119 to U.S. Provisional Patent Application No. 61/130,456, titled *Method and System for Mobile Gateway Program*, filed May 30, 2008. This provisional application is hereby fully incorporated herein by reference.

15 FIELD OF THE INVENTION

 This invention relates to systems and methods for processing financial transactions. More particularly, this invention relates to systems and methods for processing financial transactions without providing information associated with a financial account of a purchaser to the payee of the transaction.

20

BACKGROUND OF THE INVENTION

 The use of financial cards, such as a debit card or credit card, for conducting financial transactions is ubiquitous. Typically, a credit card is a plastic card that represents a line of credit that has been issued from a financial institution, the card issuer, to an individual or business, the card holder. The credit card allows the card holder to purchase goods and services against the line of credit. Credit cards may be issued by national card associations, such as AMERICAN EXPRESS or DISCOVER CARD; a financial institution in conjunction with a national card association, such as Bank of America VISA or MASTERCARD; or directly from a retailer, such as
25 MACY'S or BRITISH PETROLEUM.
30

 A debit card is typically a plastic card that represents a financial deposit

5 account held by a card holder at a financial institution. The debit card allows the account holder to purchase goods and services using the funds available in the deposit account. Debit cards are typically issued by the financial institution holding the deposit account in conjunction with a national card association.

Credit card and debit card transactions follow similar processes. A card
10 holder can make a purchase at a merchant's location by presenting the card to a cashier or by scanning the card at a merchant point of sale. The card holder can also make purchases online at a merchant's Internet website or through a merchant's telephone system by giving information associated with the card to the merchant. The information from the card (e.g., card number and expiration date) is taken by the
15 merchant and sent, along with information about the purchase and the merchant, to a transaction processor to approve the transaction. If the card is a debit card, a personal identification number ("PIN") may also be given by the card holder to the merchant and included in the information sent to the transaction processor. In other words, the card holder must provide account-specific information about the payment account to
20 the merchant.

This transaction process leaves several opportunities for thieves or "hackers" to steal this information. First, an employee of the merchant can access the card information from the merchant's systems or from data kept on the merchant's receipts of the transaction. Second, some merchants may store card information on systems
25 accessible from outside networks, such as the Internet, where hackers can gain access. Third, a merchant has little available means for verifying that a card belongs to a customer, especially if the card is used over the Internet or at an unmanned point of sale, such as a vending machine.

Accordingly, what is needed are systems and methods that provide for a more
30 secure way of completing financial card transactions. Another need exists for systems and methods for completing financial card transactions without giving a payee or merchant information associated with the financial account of the payer.

5 SUMMARY OF THE INVENTION

The present invention supports systems and methods for processing financial transactions without providing information associated with a financial account of a purchaser to the payee of the transaction.

10 An aspect of the present invention provides a system for completing a transaction using funding from a financial account provided to an account holder by an account provider without providing a merchant with information associated with the financial account or the account holder. This system includes a mobile gateway computing system operable to receive transaction data from the account holder, the transaction data including an identification of the account holder, an indication of a
15 financial account of the account holder to fund the transaction, and merchant transaction data; access account data corresponding to the indicated financial account; and transmit at least a portion of the account data and a portion of the transaction data for approval of the transaction.

Another aspect of the present invention provides a method for completing a
20 transaction using funding from a financial account provided to an account holder by an account provider without providing a payee with information associated with the financial account or the account holder. This method includes the steps of receiving, at a computing system, transaction data from the account holder, the transaction data including an identification of the account holder, an indication of a financial account
25 of the account holder to fund the transaction, and merchant transaction data; accessing, by the computing system, account data corresponding to the indicated financial account; transmitting, by the computing system, at least a portion of the account data and a portion of the transaction data for approval of the transaction; receiving, at the computing system, an indication of whether the transaction is
30 approved or declined; and if the transaction is approved, transmitting, by the computing system, an approval message to the payee.

5 Yet another aspect of the present invention provides a mobile device for use in
completing a transaction using funding from a financial account provided to an
account holder by an account provider without providing a payee with information
associated with the financial account or the account holder. This mobile device
includes a payment application executing on the mobile device. This payment
10 application is operable to provide the account holder with information associated with
financial accounts of the account holder; receive a selection of one of the financial
accounts from the account holder; receive transaction data corresponding to the
transaction; and transmit the transaction data and information associated with the
selected financial account from the mobile device to a computing system for
15 processing of the transaction.

These and other aspects, features and embodiments of the invention will
become apparent to a person of ordinary skill in the art upon consideration of the
following detailed description of illustrated embodiments exemplifying the best mode
for carrying out the invention as presently perceived.

20

BRIEF DESCRIPTION OF THE DRAWINGS

For a more complete understanding of the exemplary embodiments of the
present invention and the advantages thereof, reference is now made to the following
description, in conjunction with the accompanying figures briefly described below.

25 Figure 1 is a block diagram depicting a system architecture for processing
financial transactions without providing information associated with a financial
account of a purchaser to the payee of the transaction in accordance with an
exemplary embodiment of the present invention.

Figure 2 is an overall process flow diagram depicting a method for processing
30 financial transactions without providing information associated with a financial
account of a card holder to a merchant in accordance with an exemplary embodiment
of the present invention.

5 Figure 3 is a detailed process flow diagram depicting a method for using a payment application to complete a transaction in accordance with an exemplary embodiment of the present invention.

 Figure 4 is a detailed process flow diagram depicting a method for processing a transaction for approval in accordance with an exemplary embodiment of the present invention.
10

 Figure 5 is a detailed process flow diagram depicting a method for completing a transaction in accordance with an exemplary embodiment of the present invention.

 Figure 6 is a detailed process flow diagram depicting a method for completing a transaction using a payment application at an Internet website in accordance with an exemplary embodiment of the present invention.
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DETAILED DESCRIPTION OF THE EXEMPLARY EMBODIMENTS

 The invention provides systems and methods for processing financial transactions. Specifically, the invention provides systems and methods for processing financial transactions without providing information associated with a financial account of a purchaser to the payee of the transaction in accordance with an exemplary embodiment of the present invention.
20

 The invention can include one or more computer programs that embody at least a portion of the functions described herein and illustrated in the appended flow charts. However, it should be apparent that there could be many different ways of implementing aspects of the invention in computer programming, and these aspects of the invention should not be construed as limited to any one set of computer program instructions. Further, a skilled programmer would be able to write such computer programs to implement an embodiment of the disclosed invention based on the flow charts and associated description in the application text. Therefore, disclosure of a particular set of program code instructions is not considered necessary for an
25
30

5 adequate understanding of how to make and use the invention. The inventive
functionality of the claimed computer programs will be explained in more detail in
the following description read in conjunction with the figures illustrating the program
flow. Further, those skilled in the art will appreciate that one or more of the stages
described may be performed by hardware, software, or a combination thereof, as may
10 be embodied in one or more computing systems.

Turning now to the drawings, in which like numerals represent like elements
throughout the figures, aspects of the exemplary embodiments will be described in
detail. Figure 1 is a block diagram depicting a system architecture **100** for processing
financial transactions without providing information associated with a financial
15 account of a purchaser to the payee of the transaction in accordance with an
exemplary embodiment of the present invention. For the purpose of this application,
the terms merchant and payee are used interchangeably to describe any payee in a
financial transaction and can include a person, business, service provider or any other
entity that receives a form of payment in a financial transaction.

20 Referring to Figure 1, the system architecture **100** includes a mobile gateway
130 that interacts with a mobile device **110** associated with a card holder **105** and
with a card issuer **150** to process transactions between the card holder **105** and a
merchant **120**. Although only one card holder **105** having a mobile device **110**, one
card issuer **150**, and one merchant **120** is illustrated in Figure 1, the mobile gateway
25 **130** can interact with many card holders **105**, many mobile devices **110**, many card
issuers **150**, and many merchants **120**.

The mobile gateway **110** is a computer, server, mainframe computer, or group
of computers or servers that can store information associated with many card holders'
105 financial accounts for use in approving financial transactions between the card
30 holders **105** and merchants **120** without providing any information associated with the
financial accounts to the merchants **120**.

5 The card holder **105** can be an individual or entity, such as a business, having a financial account with the card issuer **150**. The financial account can take the form of any type of financial account, including a checking account, savings account, line of credit, money market account, or a pre-paid gift card account. The card issuer **150** can issue a card, such as a credit card or debit card, to the card holder **105** having the
10 financial account with the card issuer **150**. Although the term “card holder” is being used herein, the associated financial account does not have to be embodied in a physical card, such as a credit card. As such, the “card issuer” can be any account provider.

 The card holder **105** can create an account with the mobile gateway **130** and
15 set up one or more payment options with the mobile gateway **130**. To create an account with the mobile gateway **130**, the card holder **105** provides the mobile gateway **130** with card holder information. This card holder information can include the card holder’s **105** name, address, mobile phone number, other contact information, a user name, a password, and any other information associated with the
20 card holder **105**. After the account is created, the card holder **105** can set up the payment options. The payment options can include any financial account held in conjunction with a card issuer **150**, such as a checking account, a savings account, a line of credit, a money market account, a demand deposit account (“DDA”) or a pre-paid gift card account, for which a card or account has been established with the card
25 issuer **150**. For each payment option, the card holder **105** can provide the mobile gateway **130** with account information. This account information can include the name of the card issuer **150**, an account number, a card number associated with a debit card or credit card, a card expiration date, an account nickname, and if applicable to the account, a personal identification number (“PIN”). For example, the
30 card holder **105** can create a VISA credit card account nicknamed “Personal Credit Card” and a debit card account nicknamed “Checking Account” with the mobile gateway **130**.

5 After setting up the payment options with the mobile gateway **130**, the card holder **105** can complete transactions with a merchant **120** using funding from a financial account represented by a payment option at the mobile gateway **130** without providing the merchant **120** with any information associated with the card holder **105** or the financial account of the card holder **105**. Thus, these transactions appear as
10 anonymous to the merchant **120**.

 In one embodiment, the card holder **105** can use the mobile device **110** in place of a credit card or debit card. The mobile device **110** can be a mobile phone, personal digital assistant (“PDA”), or a mobile computing device. The mobile device **110** merely represents a communications device and can also be a non-mobile device,
15 such as a desktop computer.

 The mobile device **110** can include a payment application **112**. The payment application **112** is a software application that can be installed on and executed the mobile device **110**. Alternatively, the payment application **112** can be a web application accessed through a web browser at the mobile device **110**. In a web
20 application embodiment, the software application **112** may be provided by a web server (not shown) at the mobile gateway **130**. The payment application **112** allows the card holder **105** to select one of the payment options that the card holder **105** set up at the mobile gateway **130** to fund a transaction with the merchant **120**. The payment application **112** can receive information associated with the payment options
25 from the mobile gateway **130** by way of an Internet connection between the mobile device **110** and the mobile gateway **130** or by way of a mobile phone carrier network if the mobile device **110** is a mobile phone or other device that communicates through a cellular network carrier.

 The mobile device **110** can also include a two-way communications module
30 **113** that can communicate with a merchant point of sale **121** having a two-way communications module **122**. The two-way communications modules **113** and **122** can include hardware and software to support two-way communications protocols, such as near field communications (“NFC”), Bluetooth, and infrared (e.g., IrDA).

5 The card holder **105** can hold the mobile device **110** near the merchant point of sale **121** and the two-way communications modules **113** and **122** can establish a connection. The merchant point of sale **121** can include the two-way communications module **122**, a conventional card scanning device, and can communicate with a conventional product scanner. Additionally, the merchant point
10 of sale **121** can be an unmanned point of sale having the two-way communications module **122**, such as a vending machine or a “pay-at-the-pump” capable fueling station.

Prior to holding the mobile device **110** near the merchant point of sale **121**, the card holder **105** can access the payment application **112** to select one of the
15 payment options to fund the transaction with. The card holder **105** can access the payment application **112** by way of a user interface **111** provided by the payment application **112** at the mobile device **110**. The user interface **111** can display the available payment options and receive a selection of the payment option from the card holder **105**. In a web application embodiment, the user interface **111** can include
20 a web browser.

After the payment option has been selected, the card holder **105** can hold the mobile device **110** near the merchant point of sale **121** to complete the transaction. The payment application **112** can communicate with the merchant point of sale **121** across the two-way communications established by the two-way communications
25 modules **113** and **122**. The payment application **112** can receive merchant transaction information from the merchant point of sale **121** and provide the merchant point of sale **121** with a confirmation number for the transaction. This merchant transaction information can include the total price of the transaction, information associated with each product or service (e.g., Stock Keeping Units “SKU,” or Universal Product Code
30 “UPC”) of the transaction, information associated with the merchant **120**, and information associated with the merchant point of sale **121**.

The payment application **112** can communicate this merchant transaction data, along with a customer identification (“customer id”) and information associated with

5 the selected payment option stored on the mobile device **110** to the mobile gateway
130. The mobile gateway **130** can access card holder data and the account
information (e.g., card number and expiration date) of the selected payment option
based on the customer id and the information associated with the selected payment
option. The mobile gateway **130** can then transmit this account information, along
10 with the merchant transaction data to the card issuer **150** for approval. The card
issuer **150** can then use this information to approve or decline the transaction.

Depending on the type of payment option (i.e., credit card or debit card), the
mobile gateway **130** can route the account information and information associated
with the selected payment option to the card issuer **150** through an association **160**
15 corresponding to the credit card (e.g., VISA) or a PIN network (not shown)
corresponding to the debit card. Additionally, in some embodiments, the mobile
gateway **130** can route the information directly to the card issuer **150**. For example, if
the card issuer **150** is a retailer that provides private label accounts, the retailer may
receive the information directly from the mobile gateway **130**. In another
20 embodiment, the card issuer **150** can contract with a third party that processes the
transaction to approve or decline the transaction. In such an embodiment, this third
party may also operate the mobile gateway **130**.

After determining if the transaction is approved or declined, the card issuer
150 can send a message indicating that the transaction is approved or declined to the
25 mobile gateway **130**. In some embodiments, the mobile gateway **130** can
communicate this message to the mobile device **110** and the mobile device **110** can,
in turn, communicate the message to the merchant point of sale **120**. Additionally, in
some embodiments, the mobile gateway **130** can communicate this message to the
merchant point of sale **121** by way of an acquirer **160** associated with the merchant
30 **120**. The acquirer **160** is a financial institution or other type of organization that
provides card processing services for a merchant **120**. Some merchants **120**, such as
larger merchants and retailers, may not use the services of an acquirer **160**. In these

5 cases, the mobile gateway **130** can act as the acquirer **160** for the merchant **120**. Alternatively, the card issuer **130** can perform the functions of the acquirer **160**.

After the transaction has been completed, the card issuer **150** can settle the transaction with the merchant **120** by sending a settlement payment to the merchant **120**. The card issuer **150** can send, along with the settlement payment, an indication
10 of the confirmation number of the transaction so that the merchant **120** can match the payment to the transaction.

The mobile gateway **130** can also interact with a loyalty program module **170** to attach loyalty program data to the account information prior to sending to the card issuer **150**. This loyalty program data can include the type of loyalty account, balance
15 (such as points, airline miles, and reward stays at hotels), whether the loyalty points can be used to pay for a transaction, and whether the loyalty program may provide coupons or other discounts for the transaction. Many credit card issuers offer loyalty points to a card holder **105** for using the credit card. For example, some credit card issuers give a pre-determined number of points to a card holder **105** for each dollar
20 spent using the credit card. If a payment option is set up at the mobile gateway **130** for a financial account having a loyalty program, this loyalty program data can be stored by the loyalty program module **170** and accessed by the mobile gateway **130** when a transaction involving the payment option is being processed. In one example, a cardholder **105** uses a credit card that earns airline miles -- one mile for every dollar
25 spent. The loyalty program module **170** would automatically update the number of miles in the card holder's **105** account based on the dollar amount of the transaction. In another example, a loyalty program may allow the card holder **105** to pay for a transaction with points from a loyalty program. In this example, the card holder **105** can select points from a loyalty program as the payment option. Once the transaction
30 is approved, the loyalty program module **170** can deduct points from the cardholder's **105** account to pay for the transaction.

In yet another example, the loyalty program may allow for a "coupon" to be applied to the purchase of a particular product. In this example, the card holder **105**

5 may scan a coupon at the merchant point of sale **121** to receive a discount for the product. The merchant point of sale **121** can capture information from the coupon. The merchant point of sale **121** can also capture the Stock Keeping Unit (“SKU”) or Universal Product Code (“UPC”) of the product when the product is scanned at the merchant point of sale **121**. The loyalty program module **170** can use this coupon and
10 product information, along with loyalty program data, to determine whether the coupon can be applied to the transaction. If the coupon can be applied to the transaction, the mobile gateway **130** can discount the value of the coupon from the transaction prior to transmitting the transaction data to the card issuer **150**. Alternatively, the loyalty program module **170** can determine if a “coupon” can be
15 applied to a transaction without the card holder **105** presenting a physical coupon. In this embodiment, the loyalty program module **170** evaluates the merchant transaction data and determines if the transaction is available for a discount. The loyalty program module **170** would then apply any available discounts. For example, a card holder **105** may purchase a COCA-COLA product. Further, the card holder **105** may be a
20 member of a COCA-COLA loyalty program. The loyalty program module **170** would evaluate the merchant transaction data and determine that the transaction involves a COCA-COLA product. The loyalty program module **170** may then apply a \$1.00 discount to the purchase. So, a \$5.00 transaction may be modified such that the card holder **105** ends up paying \$4.00 only, with the \$1.00 “coupon” covering the
25 rest of the transaction.

The system architecture **100** is described hereinafter with reference to the methods illustrated in Figures 2-5. These exemplary methods are illustrative and in alternative embodiments of the invention, certain steps can be performed in a different order, in parallel with one another, or omitted entirely, and/or certain
30 additional steps can be performed without departing from the scope and spirit of the invention.

Figure 2 an overall process flow diagram depicting a method **200** for processing financial transactions without providing information associated with a

5 financial account of a card holder **105** to a merchant **120** in accordance with an exemplary embodiment of the present invention. The method **200** is described hereinafter with reference to Figures 1 and 2.

Referring to Figures 1 and 2, at step **205**, the card holder **105** creates an account with the mobile gateway **130**. To create an account, the card holder **105**
10 provides the mobile gateway **130** with card holder information. As discussed above in connection with Figure 1, this card holder information can include the card holder's **105** name, address, mobile phone number, other contact information, a user name, a password, and any other information associated with the card holder **105**. In one exemplary embodiment, the card holder **105** can provide the card holder
15 information to the mobile gateway **130** by way of an Internet website provided by the mobile gateway **130**. Subsequently, the card holder **105** can "log into" the mobile gateway's **130** Internet website using the user name and password to manage the card holder's **105** account. The mobile gateway **130** can also assign the card holder **105** a customer id. After the account is created or modified by the card holder **105**, the
20 mobile gateway **130** stores the card holder information in a data storage unit, such as a database, stored on or coupled to the mobile gateway **130**.

At step **210**, the card holder **105** sets up one or more payment options with the mobile gateway **130**. As discussed above, the payment options can include any financial account held in conjunction with a card issuer **150**, such as a checking
25 account, savings account, line of credit, money market account, DDA or a pre-paid gift card account. Another payment option is a loyalty program. For each payment option, the card holder **105** provides the mobile gateway **130** with account information associated with the payment option. As discussed above in connection with Figure 1, this account information can include the name of the card issuer **150**,
30 an account number, a card number associated with a debit card or credit card, a card expiration date, an account nickname, and if applicable, a PIN. Similar to creating an account with the mobile gateway **130**, the card holder **105** can set up and modify payment options by way of an Internet website provided by the mobile gateway **130**.

5 After the payment options are set up or modified by the card holder **105**, the mobile gateway **130** stores the account information for each payment option in a data storage unit, such as a database, stored on or coupled to the mobile gateway **130**.

In some exemplary embodiments, the card holder **105** can also create and manage an account with the mobile gateway **130** and manage the payment options by way of mail, electronic mail (“e-mail”) or a telephone system. For example, the card holder **105** can work with an operator or administrator to set up an account over the telephone system.

At step **215**, the mobile gateway **130** transmits information associated with the payment options to the payment application **112** at the mobile device **110** associated with the card holder **105**. If the mobile device **110** is a mobile phone or other device that communicates with a cellular network carrier, the mobile gateway **130** can send this information to the mobile device **110** by way of the mobile phone carrier network.

Alternatively, the card holder **105** can establish an Internet connection at the mobile device **110** and launch the payment application **112**. The payment application **112** can then establish a connection with the mobile gateway **130** to receive the information associated with the payment options. In some exemplary embodiments, the mobile gateway **130** can transmit this information automatically based on a time period or when an account is created or modified. In some exemplary embodiments, the user interface **111** provided at the mobile device **110** can have a button or icon to allow the card holder **105** to initiate the transmittal of this information to the payment application **112**.

In one exemplary embodiment, the information associated with the payment options includes the nickname of each payment option set up by the card holder **105** at the mobile gateway **130** only. Thus, no account information, such as card number or expiration date, is stored on the mobile device **110**.

5 At step **220**, the card holder **105** initiates a purchase. If the card holder **105** is
in a store, the card holder **105** can gather any items that the consumer **105** intends to
purchase and take the items to a cashier or self checkout station. The cashier or the
card holder **105** can scan an identifier (e.g., SKU, or UPC) associated with each item
at a merchant point of sale **121**. The merchant point of sale **121** can gather
10 information associated with each item and determine a total price for all of the items.

 Additionally, the card holder **105** can initiate a transaction at an unmanned
point of sale device, such as a vending machine or fueling station. Or, the card holder
105 can initiate a purchase with another person using a person-to-person transaction,
where each person has a mobile device **110** having a two-way communications
15 module **113**. In a person-to-person transaction, the mobile device **110** of the payee of
the transaction can act as the merchant point of sale **121**.

 At step **225**, the card holder **105** uses the payment application **112** to complete
the purchase initiated at step **220**. The card holder **105** accesses the payment
application **112** and chooses one of the payment options. The card holder **105** then
20 holds the mobile device **110** near the merchant point of sale **121** and the mobile
device **110** and the merchant point of sale **121** establishes a connection across their
respective two-way communications modules **113** and **122**. After the connection is
established, the merchant point of sale **121** transmits merchant transaction data to the
payment application **112** on the mobile device **110**. As discussed above in connection
25 with Figure 1, this merchant transaction data can include the total price of the
transaction, information associated with each product or service (e.g., SKU, UPC,
travel information) of the transaction, information associated with the merchant **120**,
and information associated with the merchant point of sale **121**. The payment
application **112** generates a confirmation number corresponding to the transaction and
30 the mobile device **110** transmits the confirmation number to the merchant point of
sale **121**. The payment application **112** sends, by way of the mobile device **110**, this
confirmation number, along with the merchant transaction data received from the
merchant point of sale **121**, information associated with the selected payment option,

5 and the customer id of the card holder **105** to the mobile gateway **130**. For simplicity of discussion, this information is hereinafter referred to as mobile transaction data. In one exemplary embodiment, mobile transaction data is combined into one mobile transaction data file for transmittal from the mobile device **110** to the mobile gateway **130**. This process of using the payment application **112** to complete a transaction is
10 described in more detail herein in connection with Figure 3.

At step **230**, the transaction is processed by the mobile gateway **130** and the card issuer **150** to approve or decline the transaction. After receiving the mobile transaction data, the mobile gateway **130** accesses the account information of the selected payment option. As discussed above in connection with step **210**, this
15 account information can include the name of the card issuer **150**, an account number, a card number associated with a debit card or credit card, a card expiration date, an account nickname, and if necessary, a PIN. The mobile gateway **130** adds at least a portion of this account information to the mobile transaction data. Optionally, the mobile gateway **130** can also access loyalty and rewards **170** information associated
20 with the card holder **105**, selected payment option, merchant **120**, or product or service to be purchased. If appropriate, loyalty information can be added to the mobile transaction data. The mobile gateway **130** then transmits the mobile transaction data to the card issuer **150** or association corresponding to the payment option for approval. The card issuer **150** determines whether to approve the
25 transaction, and sends a message to indicate that the transaction is approved or declined to the mobile gateway **130**. This method of processing a transaction for approval is described in more detail herein in connection with Figure 4.

At step **235**, if the transaction is approved in step **230**, the method **200** proceeds to step **245**. Otherwise, the method **200** proceeds to step **240**.

30 At step **240**, the mobile gateway **130** transmits a declined transaction message to the mobile device **110** to allow the card holder **105** the option of selecting another payment option. The payment application **112** can display the declined transaction message to the card holder **105** through the user interface **111**. The payment

5 application **112** can also prompt the card holder **105** to select another payment option. Alternatively, in some embodiments, the mobile gateway **130** can transmit the declined transaction to both the mobile device **110** and to the merchant point of sale **121** or only to the merchant point of sale **121**.

10 At step **245**, the card holder **105** can attempt the transaction again by selecting a different payment option. If the card holder **105** decides to attempt the transaction with a different payment option, the method **200** returns to step **225**. Otherwise the method **200** ends.

15 At step **250**, the approved transaction is completed. To complete the transaction, the mobile gateway **130** transmits an approved transaction message to the merchant point of sale **121**. The merchant point of sale **121** then completes the transaction with the card holder **105**. The card issuer **150** transmits a payment for the transaction to the merchant **120** and the merchant **120** matches the payment to the transaction using the confirmation number generated in step **225**. This process of completing the transaction is described in more detail in connection with Figure 5.

20 Figure 3 is a detailed process flow diagram depicting a method **225** for using a payment application **112** to complete a transaction in accordance with an exemplary embodiment of the present invention. The method **225** is described hereinafter with reference to Figures 1 and 3.

25 Referring to Figures 1 and 3, at step **305**, the card holder **105** accesses the payment application **112** at the mobile device **110**. The card holder **105** can launch the payment application **112** from the user interface **111** provided at the mobile device **110** or by pressing a “quick button” on the mobile device **110**. In some exemplary embodiments, the payment application **112** may require that the card holder **105** enter a password or PIN for security purposes. After the payment application **112** is executing, the card holder **105** can select one of the payment options set up in step **210** of Figure 2.

30

5 At step **310**, card holder **105** hold the mobile device **110** near the merchant
point of sale **121** and the two-way communication module **113** of the mobile device
110 establishes a connection with the two-way communications module **122** of the
merchant point of sale **121**. As described above, any two-way communications or
data exchange protocols can be used, such as NFC, Bluetooth, and infrared (e.g.,
10 IrDA).

 At step **315**, the merchant point of sale **121** transmits merchant transaction
data to the payment application **112** through the established connection between the
two-way communications modules **113** and **122**. As discussed above in connection
with Figure 1, this merchant transaction information can include the total price of the
15 transaction, information associated with each product or service (e.g., SKU, UPC,
travel information, price) of the transaction, information associated with the merchant
120, and information associated with the merchant point of sale **121**. This merchant
120 information and merchant point of sale **121** information can include a merchant
identification and a terminal or merchant point of sale **121** identification.

20 At step **320**, the payment application **112** displays some or all of the merchant
transaction data to the card holder **105** at the user interface for the card holder **105** to
review and approve. If the selected payment option is a debit card or other account
requiring a PIN, the payment application **112** will display an entry field for the card
holder **105** to enter this PIN. Additionally, the payment application **112** can display
25 entry fields for the card holder **105** to enter additional information, such as a tip
amount, a cash back amount, or a pay with loyalty points option.

 At step **325**, the payment application **112** generates a confirmation number
corresponding to the transaction and at step **325**, the payment application **112**
transmits this confirmation number to the merchant point of sale **121** through the
30 established connection between the two-way communications modules **113** and **122**.
The merchant **120** or the merchant point of sale **121** can store this confirmation
number in order to match a settlement payment from the card issuer **150** to the
transaction.

5 At step **335**, the payment application **112** accesses the information associated with the selected payment option and the customer id stored on the mobile device **110**. The payment application **112** sends this information associated with the selected payment option and customer id, along with the merchant transaction data received from the merchant point of sale **121**, and the confirmation number to the mobile gateway **130**. As discussed above with reference to step **225** of Figure 2, this combined information is referenced herein as mobile transaction data. In some exemplary embodiments, if the mobile device **110** has a location aware module, such as a Global Positioning System Receiver (“GPS”), the location of the mobile device **110** can also be included in the mobile transaction data.

15 If the mobile device **110** is a mobile phone or other device that communicates through a cellular network carrier, the payment application **112** can transmit the mobile transaction data to the mobile gateway **130** through the mobile phone carrier network. Alternatively, the payment application **112** can transmit the mobile transaction data by way of an Internet connection between the mobile device **110** and the mobile gateway **130**. This mobile transaction data can be sent in one file or transmission or sent in separate files or transmissions. After step **330** is completed, the method **225** proceeds to step **230** of Figure 2.

25 Although not shown in Figure 3, the payment application **112** can communicate with the mobile gateway **130** to determine if all or part of the transaction can be paid for with loyalty points. If the card holder **105** has sufficient points, then an option to apply these points to the transaction can be presented to the card holder **105** at the mobile device **110**. For example, if the card holder **105** is purchasing an airline ticket, the card holder **105** may use an airline credit card to pay for the ticket. After the payment application **112** receives the payment option (i.e., airline credit card) from the card holder **105** and the transaction data from the merchant point of sale **121**, the payment application **112** can communicate with the mobile gateway **130** to determine if the card holder **105** has any airline miles to apply

5 to the transaction. If so, the card holder **105** may be given the option to apply the miles to the transaction.

The payment application **112** and the mobile gateway **130** can also use this communication link to present advertisements, coupons, rebates, or other special offers to the card holder **105** at the mobile device **110**. If the mobile device **110** has a
10 location aware module, these offers can be selected based on the location of the mobile device **110**.

Figure 4 is a detailed process flow diagram depicting a method **230** for processing a transaction for approval in accordance with an exemplary embodiment of the present invention. The method **230** is described hereinafter with reference to
15 Figures 1 and 4. Referring to Figures 1 and 4, at step **405**, the mobile gateway **130** receives the mobile transaction data from the payment application **112**.

At step **410**, the mobile gateway **130** accesses the card holder information for the card holder **105** using the received customer id. If the mobile device **110** is a mobile phone, the mobile gateway **130** can access the card holder information using
20 the phone number of the mobile phone. The mobile gateway **130** also accesses account information for the selected payment option stored at the mobile gateway **130**.

At step **415**, the mobile gateway **130** adds at least a portion of the account information of the selected payment option to the mobile transaction data. This data
25 can include any data required by the card issuer **150** to approve the transaction, such as the account number, card number, expiration date, and the name of the card holder **105**.

At step **420**, the mobile gateway **130** accesses loyalty program data from the loyalty program module **170** and adds any loyalty program data to the mobile
30 transaction data. As discussed above in connection with Figure 1, loyalty program data can include the type of loyalty account, balance (such as points, airline miles, and reward stays at hotels), whether the loyalty points can be used to pay for a

5 transaction, and whether the loyalty program may provide coupons or other discounts
for the transaction. For example, if the card holder **105** is paying for the transaction
with loyalty points, the points may be taken from the card holder's **150** account and
this information can be added to the mobile transaction data. Or, if all or part of the
transaction is eligible for receiving loyalty points, this information can be added to
10 the mobile transaction data.

At step **425**, the mobile gateway **130** transmits the mobile transaction data to
the appropriate card issuer **150** for approval. If the selected payment option is a credit
card, the mobile gateway **130** may transmit the mobile transaction data to the
appropriate association **140** (e.g., VISA) and the association **140** can, in turn, forward
15 the mobile transaction data to the card issuer **150**. If the selected payment option is a
debit card or other account requiring a PIN, the mobile gateway **130** may transmit the
mobile transaction data to a PIN network for the card. The PIN network can verify
the PIN that the card holder **105** entered and then forward the mobile transaction data
to the card issuer **150**.

20 At step **430**, the card issuer **150** determines whether the transaction is
approved or declined. The card issuer **150** may compare the total price of the
transaction to an available balance or available credit line in the financial account that
the payment option represents. The card issuer **150** may also examine additional
information in the mobile transaction data, such as the expiration date of the payment
25 option, merchant identification, or location of the merchant (determined from
merchant identification). As stated above, a third party may provide transaction
approval services for the card issuer **150**.

At step **435**, if the card issuer **150** approves the transaction in step **430**, the
card issuer **150** sends a message to the mobile gateway **130** indicating that the
30 transaction is approved. If the card issuer **150** declines the transaction in step **430**, the
card issuer **150** sends a message to the mobile gateway **130** indicating that the
transaction is declined. After step **435** is completed, the method **230** proceeds to step
235 of Figure 2.

5 Figure 5 is a detailed process flow diagram depicting a method **250** for completing a transaction in accordance with an exemplary embodiment of the present invention. The method **250** is described hereinafter with reference to Figures 1 and 5.

 Referring to Figures 1 and 5, at step **505**, the mobile gateway **130** transmits a message indicating that the transaction is approved to the acquirer **160** corresponding
10 to the merchant **120**. Along with this message, the mobile gateway **130** can transmit some of the mobile transaction data, such as the confirmation number, to the merchant point of sale **121** so that the merchant point of sale **121** can match the message to the transaction. However, information associated with the card holder **105** and information associated with the selected payment option is typically not sent
15 to the acquirer **160**.

 At step **510**, the acquirer **160** forwards the approved transaction message and any mobile transaction data received at the acquirer **160** to the merchant point of sale **121**.

 Alternatively, in some embodiments, the mobile gateway **130** can route the
20 approved transaction message to the merchant point of sale **121** through the mobile device **110**. Additionally, the mobile gateway **130** can transmit the approved transaction message to both the mobile device **110** and the merchant point of sale **121**.

 At step **515**, the merchant point of sale **121** completes the transaction with the
25 card holder **105**. This may include notifying the card holder **105** that the transaction is approved and printing a receipt for the transaction. If the merchant point of sale **121** is an unmanned merchant point of sale, the transaction may be completed by releasing the product that the card holder **105** purchased. For example, if the merchant point of sale **121** is a bottled beverage vending machine, the vending
30 machine may release a drink purchased by the card holder **105**.

 At step **520**, the card issuer **150** updates the financial account represented by the payment option that was used to complete the transaction and routes a settlement

5 payment for the amount of the transaction to the merchant **120** by way of the acquirer **160**. This settlement payment can include an indication of the confirmation number of the transaction.

In step **525**, the merchant **120** matches the settlement payment received from the card issuer **150** to the transaction using the confirmation number.

10 Figure 6 is a detailed process flow diagram depicting a method **600** for completing a transaction using a payment application **112** at an Internet website in accordance with an exemplary embodiment of the present invention. The method **600** is an alternative embodiment to that of Figures 1-5 where a purchase is being made at an Internet website instead of at a merchant point of sale **121** or a person-to-person
15 transaction. The method **600** is described hereinafter with reference to Figures 1 and 6.

Referring to Figures 1 and 6, at step **605**, the card holder **105** initiates a transaction at an Internet website of an Internet merchant. The card holder **105** can select items for purchase at the Internet website. For example, the consumer can add
20 items to an online “shopping cart.” The consumer **105** can then click a “checkout” icon to begin the payment process.

At step **610**, the card holder **105** accesses the payment application **112** and selects the payment option for the transaction. Similar to the process of step **310** of Figure 3, the card holder **105** can launch the payment application **112** from the user
25 interface **111** provided at the mobile device **110** or by pressing a “quick button” on the mobile device **110**. After the payment application **112** is executing, the card holder **105** can select one of the payment options set up in step **210** of Figure 2.

At step **615**, the payment application **112** generates a confirmation number for the transaction. In one exemplary embodiment, the card holder **105** can instruct the
30 payment application **112** to generate a confirmation number by way of the user interface **111**. In another exemplary embodiment, the payment application **112** may generate a confirmation number automatically when the card holder **105** selects a

5 payment option. In yet another exemplary embodiment, the card holder **105** can select a button or icon on the user interface **111** for an Internet purchase and the payment application **112** can generate a confirmation number in response to the selection.

At step **620**, the card holder **105** indicates to the Internet website that the
10 method of payment is the payment application **112**. The card holder **105** may select a button or icon on the Internet website to make this indication. The Internet website can then provide an entry for the confirmation number generated in step **615**.

At step **625**, the card holder **105** enters the confirmation number into the entry space provided by the Internet website.

15 At step **630**, the card holder **105** enters merchant transaction data into the payment application by way of the user interface **111**. Similar to the embodiments of Figures 1-5, this merchant transaction data may include the total price of the transaction, information associated with each product or service (e.g., SKU, UPC, travel information, price) of the transaction, information associated with the merchant
20 **120**, and information associated with the merchant point of sale **121**. Alternatively, for simplicity of entry for the card holder **105**, this merchant transaction information may only include the total price of the transaction, an identity of the Internet merchant, and a merchant confirmation number.

At step **635**, the payment application **112** accesses the information associated
25 with the selected payment option and the customer id stored on the mobile device **110**. The payment application **112** sends this information associated with the selected payment option and customer id, along with the merchant transaction data received from the card holder **105**, and the confirmation number to the mobile gateway **130**.

At step **640**, the mobile gateway **130** and card issuer **150** process the
30 transaction for approval similar to the method **230** of Figure 4. After processing the transaction, the card issuer **150** transmits a message to the mobile gateway **130** indicating whether the transaction is approved or declined.

5 At step **650**, if the transaction is approved, the mobile gateway **130** can transmit a message to the Internet merchant indicating whether the transaction is approved. The Internet merchant can then complete the transaction with the card holder **105**. If the transaction is declined, the mobile gateway **130** can transmit a message to the mobile device **110** so that the card holder **105** can have the option of
10 selecting another payment option.

 Although the method **600** has been described in terms of an Internet transaction, the method **600** can also be applied to a transaction over a telephone system of a merchant **120**. In a telephone system embodiment, the card holder **105** can provide a telephone operator (or automated telephone system) with a
15 confirmation number from the payment application **112**. The card holder **105** can also receive merchant transaction information from the telephone operator and enter this merchant transaction information into the payment application **112**. The payment application **112** can send this information to the mobile gateway **130** and the mobile gateway **130** can, along with the card issuer **160**, process the transaction to approve or
20 decline the transaction. The mobile gateway **130** can then send an approved or declined transaction to the merchant **120** and/or to the mobile device **110**.

 One of ordinary skill in the art would appreciate that the invention provides systems and methods for processing financial transactions. Specifically, the invention provides systems and methods for processing financial transactions without providing
25 information associated with a financial account of a purchaser to the payee of the transaction in accordance with an exemplary embodiment of the present invention.

5 CLAIMS

What is Claimed:

1. A system for completing a transaction using funding from a financial account provided to an account holder by an account provider without providing a merchant with information associated with the financial account or the account holder, comprising:

10 a mobile gateway computing system, operable to:

receive transaction data from the account holder, the transaction data comprising an identification of the account holder, an indication of a financial account of the account holder to fund the transaction, and merchant transaction data;

15 access account data corresponding to the indicated financial account; and

transmit at least a portion of the account data and a portion of the transaction data for approval of the transaction.

20

2. The system of Claim 1, wherein the mobile gateway computing system is further operable to receive an indication of whether the transaction is approved or declined.

25 3. The system of Claim 2, wherein the mobile gateway computing system is further operable to transmit a message comprising the indication of whether the transaction is approved or declined.

5 4. The system of Claim 1, wherein the merchant transaction data
comprises at least one of a cost of the transaction, a merchant identification, and a
merchant point of sale identification.

10 5. The system of Claim 1, wherein the account data comprises at least
one of an account number, a card number corresponding to a card issued by the
account provider to the account holder, and an expiration date for the card.

15 6. The system of Claim 1, wherein the mobile gateway computing system
further comprises a loyalty program module operable to access loyalty program
data.

20 7. The system of Claim 1, wherein the transaction data is received from a
payment application executing on a mobile device associated with the account
holder.

 8. The system of Claim 7, wherein the payment application provides a
user interface at the mobile device for receiving a selection of the financial
account from the account holder.

25 9. The system of Claim 7, wherein the mobile device comprises a two-
way communications module for communicating with a merchant point of sale to
receive the transaction data and to transmit a confirmation number to the
merchant point of sale.

30

5 10. A method for completing a transaction using funding from a financial account provided to an account holder by an account provider without providing a payee with information associated with the financial account or the account holder, comprising the steps of:

 receiving, at a computing system, transaction data from the account holder, the transaction data comprising an identification of the account holder, an indication of a financial account of the account holder to fund the transaction, and merchant transaction data;

 accessing, by the computing system, account data corresponding to the indicated financial account;

15 transmitting, by the computing system, at least a portion of the account data and a portion of the transaction data for approval of the transaction;

 receiving, by the computing system, an indication of whether the transaction is approved or declined; and

 if the transaction is approved, transmitting, by the computing system, an approval message to the payee.

25 11. The method of Claim 10, wherein the merchant transaction data comprises at least one of a cost of the transaction, a payee identification, and a payee point of sale identification.

 12. The method of Claim 10, wherein the account data comprises at least one of an account number, a card number corresponding to a card issued by the account provider to the account holder, and an expiration date for the card.

5 13. The method of Claim 10, further comprising the step of accessing
loyalty program data.

10 14. The method of Claim 10, wherein the transaction data is received from
a payment application executing on a mobile device associated with the account
holder.

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5 15. A mobile device for use in completing a transaction using funding from a financial account provided to an account holder by an account provider without providing a payee with information associated with the financial account or the account holder, comprising:

10 a payment application executing on the mobile device, the payment application operable to:

 provide the account holder with information associated with a plurality of financial accounts of the account holder;

 receive a selection of one of the plurality of financial accounts from the account holder;

15 receive transaction data corresponding to the transaction; and

 transmit the transaction data and information associated with the selected financial account from the mobile device to a computing system for processing of the transaction.

20 16. The mobile device of Claim 15, wherein the transaction data comprises at least one of a total cost of the transaction, and an identification of the payee.

25 17. The mobile device of Claim 15, wherein the payment application is further operable to generate a confirmation number corresponding to the transaction.

30 18. The mobile device of Claim 15, further comprising a two-way communications module for communicating with a point of sale device associated with the payee.

5 19. The mobile device of Claim 18, wherein the payment application is operable to receive the transaction data from the point of sale device associated with the payee by way of the two-way communications module.

10 20. The mobile device of Claim 18, wherein the two-way communications module comprises a near field communications module.

 21. The mobile device of Claim 18, wherein the two-way communications module comprises a Bluetooth module.

15

REPLACEMENT SHEET

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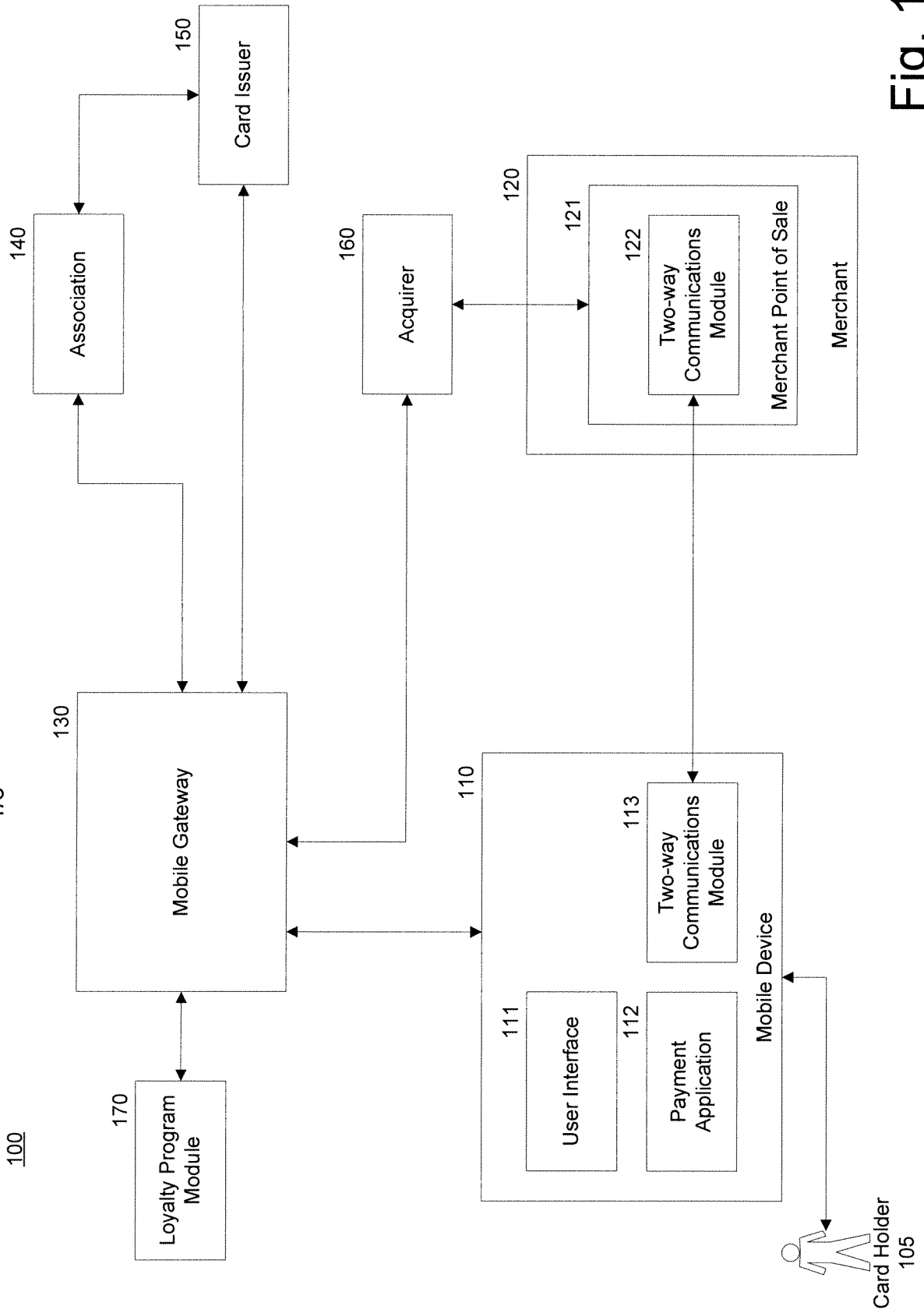


Fig. 1

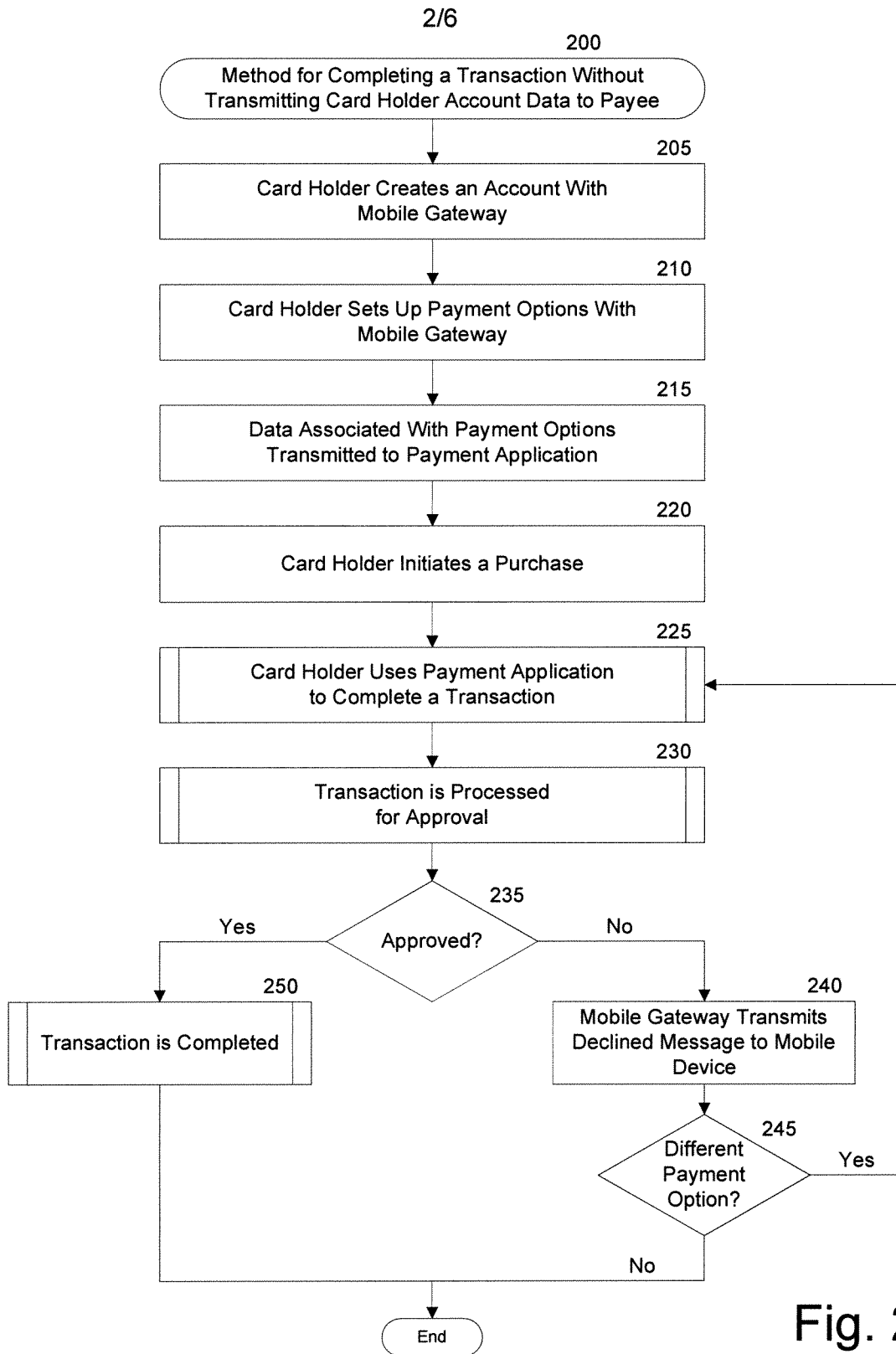


Fig. 2

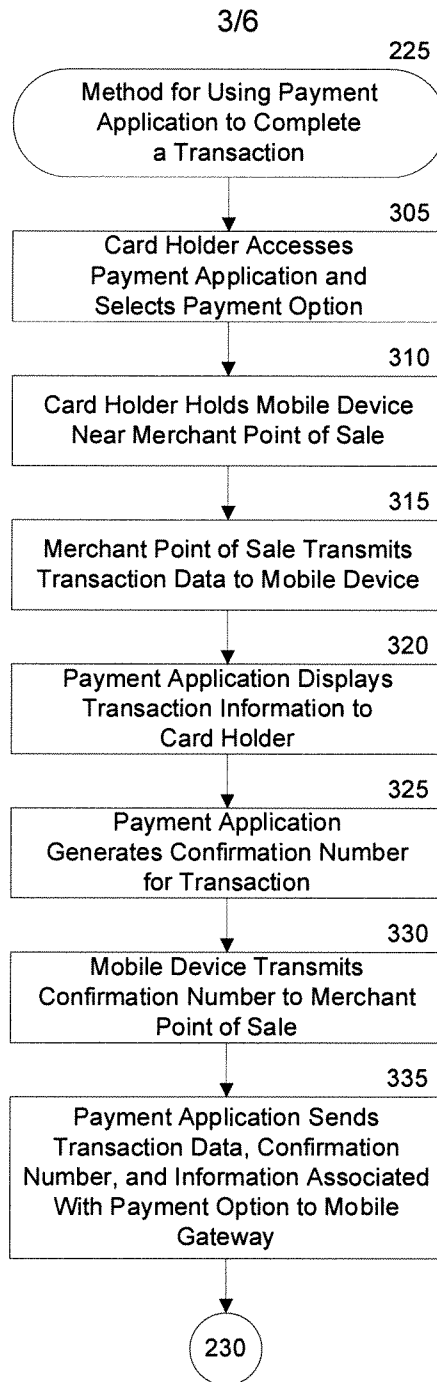


Fig. 3

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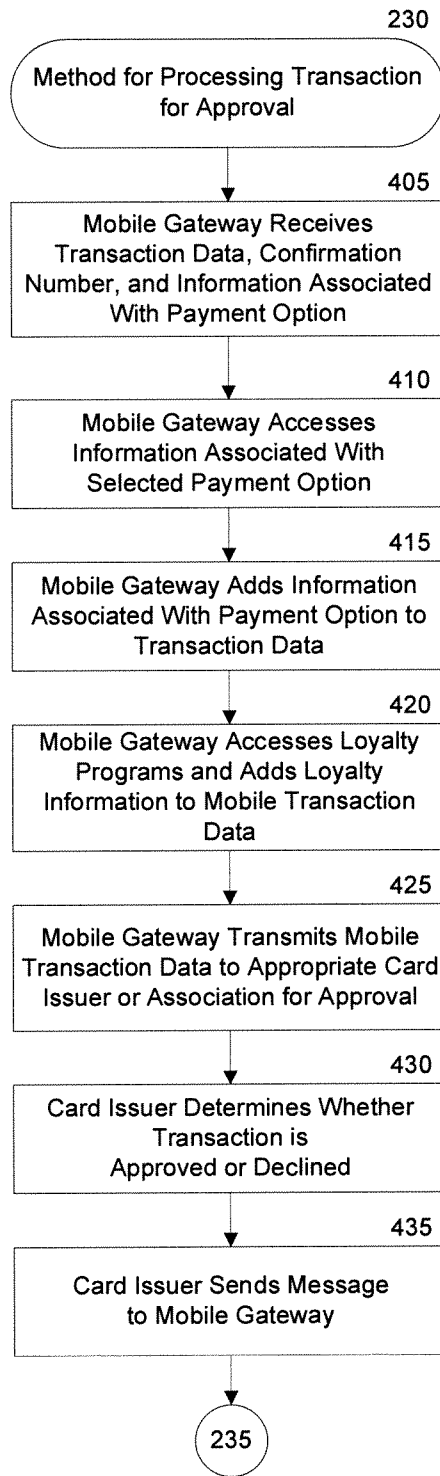


Fig. 4

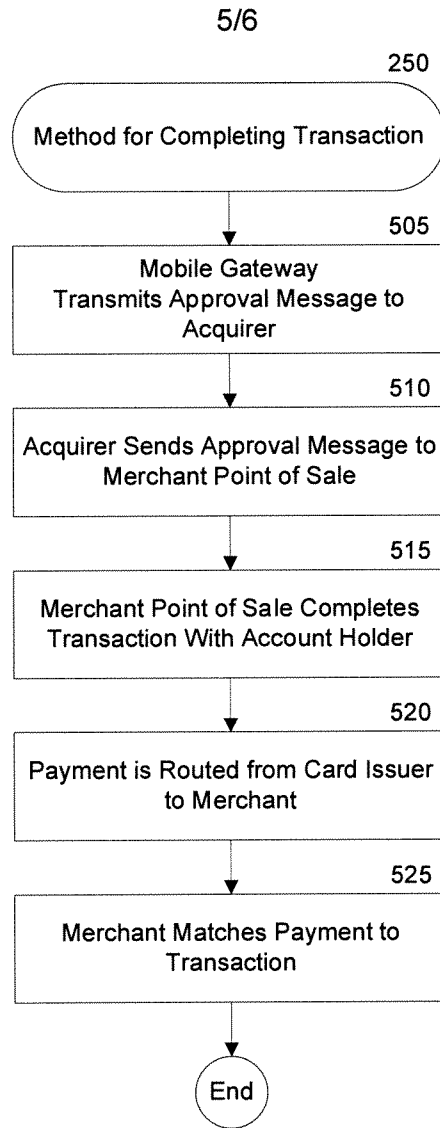


Fig. 5

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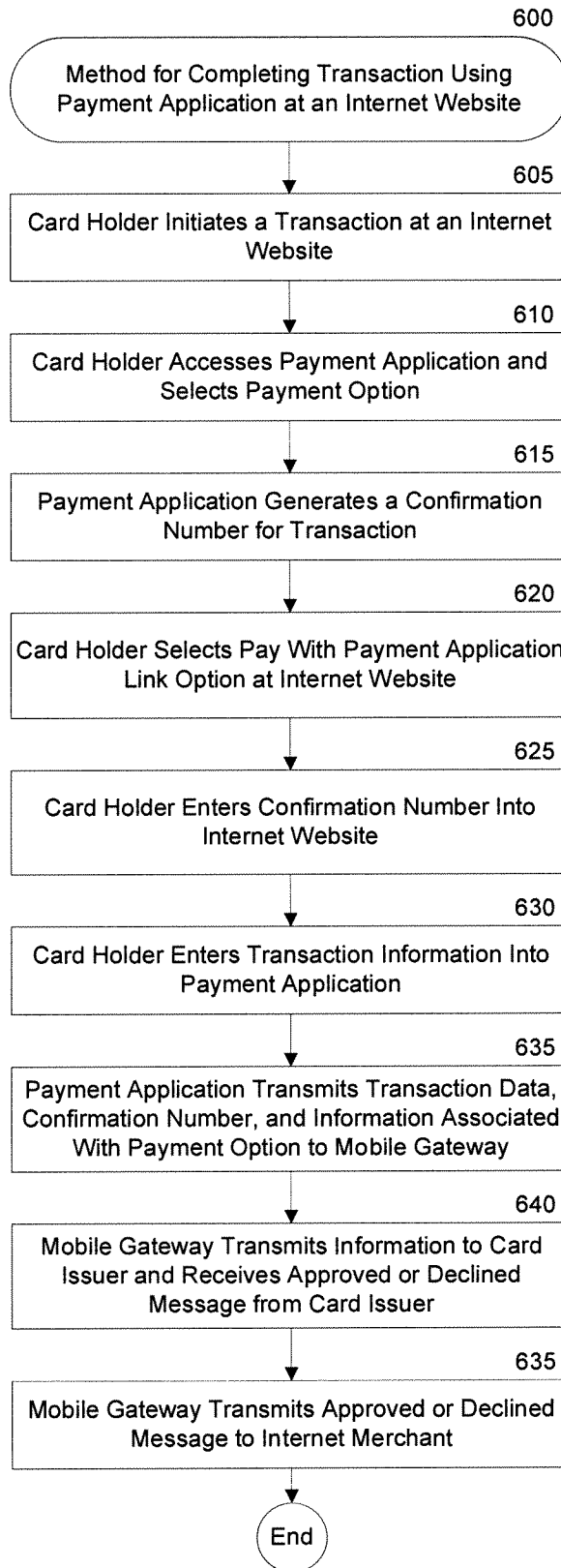


Fig. 6

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 09/45625

A. CLASSIFICATION OF SUBJECT MATTER IPC(8) - G06Q 20/00 (2009.01) USPC - 705/74 According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) 705/74 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched USPC: 705/1, 35, 39, 44, 64, 79; 700/1, 90; 902/8, 24 Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) PubWEST: (PGPB,USPT,EPAB,JPAB); Google Scholar Search Terms: transaction, fund account, pay account, money account, financial account, holder account, purchaser account, buy account, merchant, seller, vendor, payee, without providing, without information, without account, without holder, anonymous, undisclosed, unidentified		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X — Y	US 2008/0052226 A1 (AGARWAL et al.) 28 February 2008 (28.02.2008), abstract and para [0002], [0011], [0030]-[0032], [0035]-[0043], [0045]-[0046], [0049], [0058], [0063], [0067], [0071].	1-5, 7-12, 14-19 and 21 ----- 6, 13 and 20
Y	US 2007/0198432 A1 (PITRODA et al.) 23 August 2007 (23.08.2007), abstract and para [0025], [0047], [0054], [0310].	6 and 13
Y	US 2007/0255662 A1 (TUMMINARO) 01 November 2007 (01.11.2007), abstract and para [0239], [0250], [0357], [0708].	20
A	US 2007/0083460 A1 (BACHENHEIMER) 12 April 2007 (12.04.2007), entire document.	1-21
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/>		
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family		
Date of the actual completion of the international search 24 June 2009 (24.06.2009)		Date of mailing of the international search report 06 JUL 2009
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201		Authorized officer: Lee W. Young PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774