

the mobile device sending the reply message with the phone number associated with the record (retrieved from the pending transaction database 123) having the same transaction ID as specified in the reply message in the pending transaction database 123.

[0045] If the phone number of the mobile device sending the reply message does not match with the transaction ID (block 445, no), this means that the reply message was sent from an improper mobile phone and the reply message will be disregarded in block 450. On the other hand, if the phone number of the mobile device sending the reply message does match with the transaction ID (block 454, yes), this means that the reply message was received from the proper mobile device and the reply message is further analyzed to determine whether or not the user of the mobile device has approved the transaction request in block 455. Based on the content of the reply message, if the message analyzing program 240 determines that the user has approved the transaction (block 455, yes), the transaction authorization server inform the transaction processing system 120 that a proper authorization has been received from the authorized cardholder in block 460. Otherwise, if the message analyzing program 240 determines that the user has denied the transaction (block 455, no), the authorization server 122 will send a message to the transaction processing system 120 indicating that the authorized cardholder has denied the transaction request in block 465.

[0046] In an embodiment, the server 122 provides a card provider and/or a card holder with the ability to select one or more conditions for triggering an execution of the mobile reply authorization process ("MRAP") during processing of a particular transaction. FIG. 5 shows general operations of enabling selection of trigger conditions according to an embodiment of the present invention. In one embodiment, the transaction authorization server 122 may choose not to perform the MRAP for certain transaction requests that satisfy the selected trigger conditions. For example, in a case where a cardholder desires to avoid using the MRAP in transactions involving less than certain purchase amount (e.g., \$50), the server 122 can be configured to require performance of the MRAP only when transaction requests involves an amount greater than \$50. In such case, any transactions involving an amount less than the threshold amount (e.g., \$50) will not require performance of the MRAP.

[0047] In block 510, a card provider and/or a cardholder may select one or more trigger conditions for requiring the MRAP. The card provider may choose one or more trigger conditions based on attributes of the account, such as, a credit limit on the account and/or the transaction history of the account. Other trigger conditions may be based on one or more of the following transaction attributes: (i) the type of purchase item (e.g., not requiring MRAP for routine transactions such as gasoline purchases), (ii) the merchant location (e.g., requiring MRAP for transactions involving merchants located in a different state as the cardholder), and/or (iii) the type of transaction (e.g., requiring MRAP for online credit card transactions).

[0048] In block 520, the trigger condition information 275 is associated with a corresponding account number and stored in the cardholder information database 124. When a transaction request is received, the transaction processing

system 120 retrieves trigger condition information 275 for the requesting account from the cardholder information database 124 in block 530. Then in block 540, the transaction processing system 120 determines if one of the trigger conditions for requiring a mobile reply authorization is satisfied based on the information contained in the transaction request. This may be accomplished by comparing the trigger conditions with appropriate field contained in the transaction request. If the transaction processing system 120 determines that a mobile reply authorization is required (block 550, yes), the transaction authorization server 122 will generate an authorization request message and forward the message to the mobile device assigned to the account requesting the transaction. In this regard, in block 560, the transaction processing system 120 will approve the transaction only if a proper mobile reply authorizing the transaction (e.g., via a reply message) is received from the mobile device assigned to the requesting account. If the card provider determines that a mobile reply authorization is not required (block 550, no), the transaction processing system 120 may approve the transaction without an authorization reply from the cardholder's mobile device if other conditions (e.g., the purchase amount is within the credit limit) for approving the transaction request is satisfied in block 570.

[0049] Although the system described above allows card users to engage in online transactions with merchant servers, it should be appreciated that the system described herein may be used by card users conducting offline transactions by communicating directly with sales agents working for merchants either face-to-face or using communication devices (e.g., wired or wireless communication device) to exchange the necessary information to carry out sales transactions. In such cases, the sales agents may manually enter the information provided by the card users into the merchant system, which will generate and sent the transaction requests to the transaction processing system of the card provider. Thus, the embodiments of the present invention are not limited to online transactions, but rather, the embodiments can be used with offline merchants accepting transaction card payments. Furthermore, as shown in FIG. 1, the transaction processing system 120 can be used to process transaction requests from the transaction computer 119, such as automatic teller machines (ATMs), point of sale (POS) terminals, credit card terminals and the like.

[0050] While the foregoing embodiments of the invention have been described and shown, it is understood that variations and modifications, such as those suggested and others within the spirit and scope of the invention, may occur to those skilled in the art to which the invention pertains. The scope of the present invention accordingly is to be defined as set forth in the appended claims.

What is claimed is:

1. A method comprising:

maintaining a database that includes a plurality of account records, at least one of the account records including: (i) an account number and (ii) a phone number of a mobile device assigned to receive authorization request messages;

receiving a transaction request which includes information regarding an account requesting a transaction; and