Therefore, a need exists for a solution that allows for the security codes on cards to be changed during the lifetime of the cards that is cheaper, more robust, and more reliable than existing solutions.

[008] The benefits of such a solution would be two-fold: first, keeping a solution based on security codes would avoid the need to change or replace the existing card payment infrastructure; second, changing the value of these security codes significantly decreases the possibility of fraudulent activity.

SUMMARY

[008a] According to a first aspect of the present invention, there is provided a method for generating a security code for a card, comprising the steps of:

transmitting a request for transaction authorization approval from a card to a delivery device connected to a network;

transmitting a request for transaction authorization approval from a delivery device to a network;

validating the request for transaction authorization approval by the network;

generating a new security code from a generator server and inserting the new security code into a transaction script;

transmitting the transaction script from the network to the delivery device; and

transmitting the transaction script from the delivery device to the card.

[008b] According to a second aspect of the present invention, there is provided a method for generating a plurality of security codes for a card, comprising the steps of:

transmitting a request for transaction authorization approval from a card to a delivery device connected to a network;

transmitting a request for transaction authorization approval from a delivery device to a network;

validating the request for transaction authorization approval by the network;

generating a plurality of security codes from a generator server and inserting the plurality of security codes into a transaction script;

transmitting the transaction script from the network to the delivery device; and

transmitting the transaction script from the delivery device to the card.

[008c] According to a third aspect of the present invention, there is provided a method for generating a security code for a card, comprising the steps of:

transmitting a request for transaction authorization approval from a card to a delivery device;

validating the request for transaction authorization approval by the delivery device;

transmitting an outcome response to the request for transaction authorization approval from the delivery device to the card; and

generating the new security code on the card.

[008d] According to a fourth aspect of the present invention, there is provided a method for generating a plurality of security codes for a card, comprising the steps of:

transmitting a request for transaction authorization approval from a card to a delivery device;

validating the request for transaction authorization approval by the delivery device;

transmitting an outcome response to the request for transaction authorization approval from the delivery device to the card; and

generating a plurality of new security codes on the card.

[008e] According to a fifth aspect of the present invention, there is provided a method of display a security code for a card, comprising the steps of:

transmitting a request for transaction authorization approval from a card to a delivery device;

validating the request for transaction authorization approval by the delivery device;

transmitting an outcome response to the request for transaction authorization approval from the delivery device to the card;

selecting one of the security codes from security codes stored in the memory area; and

displaying the one security code selected from the security codes on a display embedded in the card.

[009] There is disclosed a comprehensive "Dynamic Security Code" ("DSC") System ("DSC System") that can change the security code of a prepaid, debit, or credit card ("Payment Card"). In an effort to thwart Card-Not-Present ("CNP") fraud, the DSC System provides dynamic security code values ("DSC Values") that can have a limited use. When needed, another DSC Value will be generated by a DSC Generator Server on a network or generated by the microprocessor embedded in the DSC card. The DSC card can also be used with existing standard payment card infrastructures. In addition, the DSC System can be used with other form factors and in other environments not related to payments such as balance inquiries.

[010] When a DSC Value needs to be validated by the Issuer, it can be sent to the Issuer's DSC Validator Server ("DSC Validator Server") using the same channels as the ones used for traditional static security codes. For example, when a Cardholder uses a web browser to manually enter the DSC Value in lieu of the static security code into the electronic form provided by a merchant or into the registration form provided by an online or mobile wallet provider.

[011] In one embodiment of the invention, DSC Values are generated by a DSC Generator Server. When needed, the DSC Generator Server will calculate one or more new DSC Values for a specific DSC Card. Examples include, but are not limited to the Issuer's EMV authorization processing performed during a payment transaction, a purchase transaction, a purchase transaction with cash advance, an account status inquiry,